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China's Nuclear Agenda and the Implications for
United States Foreign Policy

by

Elizabeth D. Olmo
Lieutenant Commander, United States Navy
BA, University of South Florida, 1980

Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

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TABLE OF CONTENTS

I. INTRODUCTION 1

A. THESIS STATEMENT 1

B. RELEVANCE OF THIS SUBJECT 3

C. METHODOLOGY 5

II. CHINA'S DEVELOPMENT OF THE BOMB 7

A. INCENTIVES 7

1. Korean War Impact 8

2. Taiwan Strait Crisis Impact 12

B. RATIONALE 15

C. SINO-SOVIET NUCLEAR ALLIANCE (1954-1960) . . . 20

D. SINO-SOVIET SPLIT (1960) 23

1. Causes 23

2. Implications 29

E. DEVELOPMENT OF THE BOMB AND THE DELIVERY SYSTEMS 32

1. Ambitions 32

2. Personnel 33

3. Early Accomplishments 36

F. CONCLUSION 44

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MONTEREY CA 93943-5101

III. NUCLEAR POLICIES 45

A. NUCLEAR POLICY INFLUENCES 45

1. Security and Foreign Policy Objectives . . . 45

a. Introduction 45

b. Early Nuclear Policy Influences 48

c. Current Nuclear Policy Influences . . . 52

2. Influence of Economic Goals 53

B. NUCLEAR PROLIFERATION ISSUES 56

1. Nuclear Test Bans 58

a. Limited Test Ban Treaty 58

b. Comprehensive Test Ban 60

2. Nuclear Non-proliferation Treaty 61

a. Early Proliferation Attitudes 61

C. DISARMAMENT ISSUES 67

1. Arms Control 67

2. The Intermediate-Range Nuclear Forces Treaty 69

3. Strategic Defense Initiative 73

4. Other Nonproliferation and Disarmament Initiatives 75

D. NUCLEAR TECHNOLOGY TRANSFER ISSUES 75

1. Chinese Missile and Technology Transfers . . 77

2. China's Weapons Manufacturing Bureaucracy . 81

E. CONCLUSION 86

IV. STRATEGY AND CAPABILITIES 89

A. DEFENSE STRATEGY 89

1. Mao's People's War 90
2. People's War Under Modern Conditions 96
3. Modern Warfare Realities 103
B. CHINA'S EVOLVING NUCLEAR STRATEGY 107
1. Nuclear Development in the 1980's 107
2. Nuclear Strategy 111
C. CAPABILITIES 118
1. Modernization Efforts 118
2. Nuclear Arsenal 122
3. Weaknesses and Vulnerabilities 122
D. CONCLUSION 124

V. IMPLICATIONS 126
A. WHITHER CHINA? 126
B. IMPLICATIONS FOR AMERICAN FOREIGN POLICY . . . 131
C. CONCLUSION 136

APPENDIX A MUTUAL DEFENSE TREATY BETWEEN THE UNITED STATES AND THE REPUBLIC OF CHINA, December 2, 1954 139

APPENDIX B COMPARISON OF NUCLEAR POWER'S YEARS BETWEEN THE FIRST ATOMIC DETONATION AND ACQUISITION OF OTHER TECHNOLOGIES 143

APPENDIX C CHINA'S NUCLEAR PROGRAM ORGANIZATION, 1959-1964 144

APPENDIX D STATEMENT OF THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA, OCTOBER 16,1964 146

APPENDIX E CHINESE VERSUS UNITED STATES STRATEGIC NUCLEAR FORCES 149

APPENDIX F CHINA'S NUCLEAR AND CONVENTIONAL MISSILES . 151

APPENDIX G CHINA'S ARMS SALES BUREAUCRACY 154

LIST OF REFERENCES 156

INITIAL DISTRIBUTION LIST 162

EXECUTIVE SUMMARY

China's growing nuclear arsenal poses a twofold danger in the post-Cold War era. The increasing capability of the weapons coupled with China's unwillingness to cut back on its nuclear weapons improvements makes China a potential nuclear power in the twenty-first century. China's economic modernization program forces the military to sell many of its advanced weapons and technologies in order to fund their own developmental programs.

Of growing concern is China's tactical nuclear weapons development, deployment and proliferation. Exercises by the People's Liberation Army, complete with mock tactical nuclear weapon detonations, underscore China's intentions of using these weapons if attacked.

In conjunction with its military modernization however, China is making strides towards resolving its many disputes with its neighbors. China's rapprochement with Russia, Vietnam, and India indicate a willingness on China's part to cooperate internationally and to resolve disputes peacefully.

China has signed the Nuclear Nonproliferation Treaty, ascribed to the International Atomic Energy Agency's safeguards and has acceded to the Missile Technology Control Regime's export regulations; but while China may abide by

the letter of the law, it is not quite following the spirit of the law. This is evidenced by its selling of short-range ballistic missiles to Syria, Iran and Pakistan. China has not sold any nuclear warheads to date, however its sale of nuclear power technology and liberal assistance to other countries' nuclear power effort could, in the long term, become a destabilizing factor to global peace.

Despite China's growing military capability, especially its nuclear inventory, China's military strategies remain defensive in nature. China continues to improve the sea and air legs of its small nuclear triad and is pushing hard to improve the range and precision of its strategic ballistic missiles. The increasing vulnerability of its coastal regions, its economic zones and its industrial base in the event of a nuclear war, even a limited one, constitutes a powerful incentive for the Chinese to improve their archaic military structure and maintain a credible nuclear deterrent capability.

This thesis examines China's evolving nuclear capabilities, and looks into the motivations behind China's nuclear policies. By informing ourselves about China's nuclear aspirations, delving into its security and foreign policy concerns and examining its historical strategic perspective, we can perhaps gain some insight into China's nuclear motivations. The thesis then makes some conclusions

about the implications of China's nuclear agenda on American foreign policy.

China, as potentially the world's fastest growing economic and nuclear military power, deserves the attention and consideration that any important nation receives in our foreign relations policies. The United States should continue the normalizing of relations with China including military-to-military contacts, high and low level government interrelations as well as earnestly engaging China as an equal and important actor in building a stable post-Cold War world.

I. INTRODUCTION

A. THESIS STATEMENT

China's nuclear agenda poses one of the gravest dilemmas for the post cold war world.[1] Its rapidly developing nuclear weapons capability forebodes a potential military threat to global peace as well as a nuclear stranglehold within the Asia-Pacific region. Its arms proliferation practices, especially in the ballistic missile market, could contribute to regional instabilities threatening to embroil the United States in messy confrontations with China's less-than-peace loving clients. Its rapidly modernizing military in conjunction with an opportunistic Communist regime could possibly throw the world, including the United States, into another recurring nightmare of preparing for global nuclear war.

This thesis investigates the possibility and the consequences of a nuclear armed China using its power to

---

[1] The term nuclear agenda for the purpose of this thesis refers to nuclear policies, nuclear weapons and nuclear power plants. Included in the definition of nuclear arms proliferation is the sale of missile systems, whether conventional or nuclear tipped; dual technologies that can be used towards the development of missile systems as well as nuclear weapons; nuclear power plants; and the expertise (human, written resources, and matériel) required to develop an indigenous nuclear industry whether it be weapons manufacturing or nuclear power generation or both.

protect and promote its national interests. China's nuclear capabilities do not necessarily present a major military threat to the United States or to the Asia-Pacific region. My hypothesis, however, is that a nuclear capable China does present a major foreign policy challenge to the United States as a result of its arms proliferation policies in conjunction with its growing economic leverage and its government's uncertain political future.

While China's nuclear capabilities are substantial, it is the proliferation of these capabilities to other countries that represents the major military concern for the United States; not an antagonistic "anti-American" China.

China has stated that it does not seek global domination nor regional hegemony but wants to coexist with all nations and continue its successful economic evolution. China maintains that its military is defensive in nature; that its nuclear weapons only represent a continuing deterrent capability in a constantly changing global military environment; and the current modernization of both is a normal activity of a rapidly developing nation upgrading its forces in the interest of adequate self-defense.

This thesis will examine the validity of China's arguments. The challenge to American foreign policy makers is interacting with a China that is finally achieving its full economic potential, a China as secure in its national

defense capability as it is justified in its evolving role as a major regional power.

This appraisal of China's nuclear agenda rejects the commonly accepted chauvinistic attitudes casting China as a dangerous and threatening enemy.

Successive chapters in my thesis will show at the historical basis for China's pursuing a credible nuclear capability and present an abridged history of that nuclear development. They will delineate China's current and near-future nuclear capabilities, and review China's policies regarding nuclear war, arms proliferation, and future nuclear development. After examining China's foreign policy intentions vis-à-vis its regional neighbors as well as the world powers, my thesis concludes with the implications of a modern, nuclear and economically strategic China for American foreign policy.

B. RELEVANCE OF THIS SUBJECT

The demise of the Soviet-communist regime has presented the United States with the opportunity to reassess its relations with other nations in the context of a new political environment. As the world struggles to establish a new stable order, America must understand that stability in the global political environment is not static. It is a dynamic of constantly changing relations as old and new nations redefine themselves. The United States must be

willing to explore new options and enter into cooperative exchanges with constantly changing nations.

China is one of the most important of these changing nations and it presents one of the more important opportunities that America should explore in an increasingly vital region of the world. Realizing these opportunities however, necessitates a reassessment of the military capabilities and intentions of China. This cannot be done in the fog of a past aversion to communist states. America must accept the fact that China is a powerful and independent nation that is not ideologically identical to the old Soviet-communist ally. America should take care not to portray China in the same way that we portrayed the former Soviet Union, specifically as a powerful and threatening enemy that had to be contained and, if necessary, destroyed at all costs. We simply cannot afford another Cold War, neither can the world. China has different goals and aspirations from those of the former Soviet regime, and in many ways these goals and aspirations are identical and complementary to our own. This thesis concentrates on the nuclear aspect of China's military power and explores the foreign policy options this evolving power elicits.

C. METHODOLOGY

My historical perspective has been derived primarily from three fundamental studies: China Builds the Bomb, by John Wilson Lewis and Xue Litai; Communist China's Strategy in the Nuclear Era, by Alice Langley Hsieh; and Sino-Soviet Military Relations by Raymond L. Garthoff.

I have relied upon journals, periodicals and newspapers for facts and policy statements regarding China's weapons capabilities and policies. World Armaments and Disarmament by the Stockholm International Peace Research Institute; and Jane's various volumes on different military capabilities of the world's nations were especially informative. The Foreign Broadcast Information Service Daily Reports on China were extremely useful. The International Missile Proliferation Project and the Emerging Nuclear Suppliers Project at the Monterey Institute of International Studies provided a miraculous database replete with facts, articles, policy statements and hard evidence concerning China's arms proliferation practices.

Journals predominately used covering the subject included Asian Survey, Foreign Affairs, The Annals of the American Academy of Political and Social Science and International Security. Far Eastern Economic Review, The China Bulletin, The Bulletin of Atomic Scientists and Arms Control Today represent the periodicals most helpful towards

finding documented current events on China's nuclear program and foreign policies.

II. CHINA'S DEVELOPMENT OF THE BOMB

A. INCENTIVES

On 16 October 1964 China detonated it first nuclear weapon. This represented a decisive step in the march of China to its recognized status as a great power. The detonation was the end of a formidable push to gain atomic power and knowledge and the beginning of a modern China prepared to play a major role in international politics as the newest member of the Nuclear Club. The detonation also represented China's constant obsession with achieving and using technological capability as a major underpinning in its quest to be considered a major modern world power. This was to become a recurring motif in China's evolving modern history and still holds true today.

The detonation of the atom bomb also represented proof of Chinese self-reliance as well as testimony to China's rapidly evolving scientific and technological capabilities. China's decision to pursue a nuclear capability was preceded by several international events that caused China to reevaluate its position in the arena of international politics. This reevaluation brought about a change in its national security objectives as well as its alliance with the Soviet Union. The outcome of this reevaluation was the

Chinese atomic bomb. It is with these events that this chapter concerns itself.

1. Korean War Impact

China's entrance into the Korean War in 1950 marked the beginning of a short but significant alliance with the Soviet Union resulting in substantial Sino-Soviet military assistance. The horrendous casualties sustained by the Chinese People's Liberation Army forces in Korea at the hands of the superiorly armed American forces forced China to confront its inadequate military capability and the vulnerabilities this presented.[2] [Ref. 1:p. 8]

The stark realizations of the Korean War made a large impact on the Chinese military command and induced them to "modernize under fire" their armed forces. Mao's "People's War" while not abandoned, was restyled as "People's War Under Modern Conditions" allowing for the incorporation of modern military technology and modern warfare required to fight a modern day enemy. While the strategy of guerilla warfare was not abandoned, the Korean War required new tactics and Mao's doctrine proved flexible enough to incorporate the fixed line defenses and uses of aircraft, heavy artillery and guns to augment the People's Liberation Army. [Ref. 2:p. 103]

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[2]Estimates of Chinese casualties: by June 1951--577,000 (73,000 of which were non-combatant casualties) and 16,500 prisoners of war taken by allied troops.

China's modernization program began with a massive infusion of Soviet weaponry during the Korean War and continued as a close Sino-Soviet military cooperation alliance at war's end. Soviet fighter aircraft, bombers, submarines and destroyers were transferred to the Chinese. This military assistance became a heavy burden to China since it was required to *buy* the weapons from the Soviets thereby incurring a debt of over two billion dollars by 1957, only one half of which had been paid. [Ref. 3:p. 85]

Dependence on Soviet military weapons kept China developmentally reliant on the Soviet Union in the early 1950's, but by the end of the decade China resolved to rely primarily on itself for its technological development. This resolve was unwittingly aided by Stalin who, by forcing the Chinese to pay for their weapons' transfers, denying them access to military production techniques, and transferring obsolete equipment which would have to be replaced shortly with newer Soviet materiél. He endeavored to keep China dependent on the Soviet Union and therefore weak.

This pattern, the Soviets forcing Chinese dependency through selective Soviet military assistance, would be continued during the early stages of China's quest for the atomic bomb. However, the duplicity of the Soviets (characterized by their refusing to send China the prototype of an atomic weapon as promised at the critical phase of development) as well as deep ideological rifts between the

two countries, would eventually compel China to pursue its nuclear program on its own. These same rifts would also result in China eventually targeting their nuclear weapons on their former Soviet allies. Initially, however, Soviet military assistance during the Korean War helped China begin the modernization of its armed forces and to realize the important role of modern weaponry and technological capability in a nation's security.

Another impact of the Korean war was the realization of the political clout a nuclear armed country had over a non-nuclear capable nation as represented respectively by the United States and China. President Eisenhower, endeavoring to end the Korean War after his election in 1952, conferred with his military commanders. Their possible strategies to end the Korean War and bring about an armistice included the use of atomic weapons, blockading the Chinese mainland and attacking Chinese troops in Manchuria. President Eisenhower hinted at of the possible use of nuclear weapons against Beijing. [Ref. 1:pp. 13-14] Chinese response to the United State's "nuclear blackmail" was to dig in deeper and prepare for nuclear war. However, several months after the policy of possible nuclear weapons use had been iterated and after the death of Stalin (resulting in a Soviet government less inclined to support the Chinese war in Korea), China acquiesced to American demands and an armistice was signed.

Much debate remains whether the threatened use of nuclear weapons or the changing political environment in Moscow actually brought about Chinese capitulation to American demands. There is little doubt however, that Chinese concerns over United States' emerging policy of resorting to nuclear weapons to contain China in Asia caused it to reevaluate its non-nuclear status. After President Eisenhower's 1954 State of the Union address in which he presented the nation with the new "massive retaliation" strategy, the Chinese government:

> ...denounced the military tone of the president's address to the nation...'Its main points [which] are...to build up atomic weapons [and] to develop new weapons...in order to intimidate and to maintain a tense international situation.' [Ref. 1:p. 19]

Chinese concerns over perceived American aggression towards China were further underscored by the evolving alliance between the United States and the Republic of China (ROC or Taiwan). The talk of completion of a defense treaty between the United States and Taiwan in late 1954 and of a possible Chinese Nationalist attacks on the mainland precipitated a Communist China response that led to yet another confrontation between China and the United States, this time in the Taiwan Straits. [Ref. 1:p. 22]

2. Taiwan Strait Crisis Impact

Conflict between Communist Chinese forces and Chiang Kai-shek's Nationalist forces had been sporadic since 1949. Since neither side regarded the Chinese Civil war as ended, Mao regarded the question of the Nationalists and Taiwan as "unfinished business" that had to be temporarily put aside at the onset of the Korean War. Neither side had much energy for the Battle of Taiwan as long as hostilities raged in Korea.

An end to the Korean war in 1954 once again brought the Taiwan question to the forefront as Nationalist forces continued to mount attacks against the mainland by harassing Soviet and Chinese ships bound for mainland China's ports. [Ref. 1:p. 24] Tension between Communist China and the United States also remained high as the United States sought to develop a foreign policy in Asia that designed to contain the Communist Chinese threat. United States nuclear carrier battle group patrols in the East China Sea did nothing to allay China's concerns either. Despite sporadic fighting in the straits and tense relations however, the incidents were not viewed as overtly threatening to American vital interests in the area.[3] [Ref. 1:p. 30] However, the

---

[3] Lewis in China Builds the Bomb refers to two U.S intelligence estimates in September of 1954 that basically conclude that China would be expected to resort to "probing actions" to test U.S. resolve rather than risk attacking Taiwan and entering another war against the United States. This is in fact what China did when they resorted to simply

Eisenhower administration continued to express alarm over the Communist (Soviet as well as Chinese) intentions in the area and made several political overtures to contain them, one of which culminated in the Southeast Asia Collective Defense Treaty signed in September of 1954. Additionally, Taiwan had pressured the United States into signing a bilateral mutual defense treaty to be effective in the event of war against the mainland. It was with concern and mounting anger at the interference of the United States that Communist China felt compelled to act.

The resulting "crisis" that ensued was more a political reaction by China with military action merely ancillary to the political goal of testing American resolve in the Taiwan Strait. China did not relish entering another war with the United States. China contented itself with the occupation of the Dachen Islands far to the north of Taiwan (rather than invading Quemoy or Taiwan itself). Nationalist troops withdrew from Dachen, having previously determined the islands indefensible and expendable. China also shelled the offshore islands without making any attempt to occupy them. (see note 2). In this way China sought to "warn off" the United States from meddling in what it considered internal affairs and to express its displeasure

---

shelling Quemoy and Matsu rather than invading the islands.

with growing American offensive "imperialistic" designs in Asia.

In January 1955, the Senate agreed to the ratification of the mutual defense treaty and Congress passed the Formosa Resolution (refer Appendix A) giving President Eisenhower authority to employ troops in the region to protect Taiwan. Some intelligence units in Washington warned that a bilateral defense treaty would be "not only [be] unnecessary, but provocative" and that the already firm ties between Taipei and Washington were sufficient to keep the Communists from invading Taiwan. [Ref. 1:p. 31]

The signing of the defense treaty did not result in a buildup of American forces in the area beyond the two nuclear carrier groups already present. However, John Lewis agrees with political scientists Morton Halperin's and Tang Tsou's assessment that American threats backed up by defense treaties and patrolling nuclear capable ships were construed by China to mean that the United States was willing to defend any aggression against Taiwan or the offshore islands of Quemoy and Matsu with nuclear weapons. [Ref. 1:p. 34] They maintain that the Chinese were merely reacting to a crisis rather than initiating it. The perceived threat of nuclear weapons deployed close to the mainland and aggressive containment measures advocated by the United States government presented yet another incentive for a

weaker China to develop a nuclear weapons capability of its own. Thus in 1955, when internal debate persuaded the Chinese that a nuclear weapon was attainable, a decade-long push for a strategic weapons capability began.

B. RATIONALE

These international events leading up to China's decision to develop nuclear weapons served to underscore the Chinese government's determination to protect the nation against enduring military threats and to bolster the fledgling communist country's status in the international arena. In this respect, the nuclear bomb was from the beginning developed primarily as a political instrument designed to increase the clout of China with what it perceived as the dual threat of a nuclear capable Soviet Union and United States. Indeed Mao Tse-Tung had openly displayed his disdain for the nuclear bomb as an effective military weapon during a 1946 interview with the American correspondent Anna Louise Strong in Peking. During the course of the conversation Mao made clear his view of the impracticality of atomic weapons as military offensive weapons and put forth his view of the overwhelming power of people versus materiél:

> *Strong:* Suppose the United States uses the atom bomb? Suppose the United States bombs the Soviet Union from its bases in Iceland, Okinawa and China?

> *Mao:* The atom bomb is a paper tiger which the U.S. reactionaries use to scare people. It looks terrible, but in fact it isn't. Of course, the atom bomb is a weapon of mass slaughter, but outcome of a war is decided by the people, not by one or two new types of weapon.
>
> All reactionaries are paper tigers. In appearance, the reactionaries are terrifying, but in reality they are not so powerful. From a long-term point of view, it is not the reactionaries but the people who are really powerful...Take the case of China. We have only millet plus rifles to rely on, but history will finally prove that our millet plus rifles is more powerful than Chiang Kai-shek's aeroplanes plus tanks.... [Ref. 4]

Clearly Mao did would not admit that the atomic weapon as the sole answer to China's security problems and openly deprecated American threats to resort to nuclear weapons as force posturing and ineffective, in the long run.

In the short term however, he recognized the potential of nuclear weapons, especially as a political card to be used against the diplomatic and policy pressures of a more powerful United States. Mao sought to break the "nuclear monopoly" of the United States and the Soviet Union and ensure the ability of China to pursue its sovereign right to "display, deploy, and commit its armies" [Ref. 1:p. 35] and to pursue its foreign policy objectives without interference.

Several 1963 statements by the Chinese government reflect their long held views that nuclear weapons should not be limited to only a few powerful nations and that China's possession of nuclear weapons was primarily a counterweight against the nuclear superpowers:

> Nuclear weapons in the possession of a socialist country are always a means of defense against nuclear blackmail and nuclear war.
>
> There are more than 130 countries in the world. All countries, big or small, nuclear or non-nuclear, are equal. It is absolutely impermissible for two or three countries to brandish their nuclear weapons at will, issue orders and commands, and lord it over in the world as self-ordained nuclear overlords, while the overwhelming majority of countries are expected to kneel and obey orders meekly, as if they were nuclear slaves. The time of power politics has gone forever, and major questions of the world can no longer be decided by a few big powers. [Ref. 5]

In conjunction with the growing realization of the political power of nuclear weapons there possibly existed a growing Chinese concern over whether the Soviet nuclear umbrella would extend to China. Seeming Soviet reluctance to help China take Taiwan or take action against the United States should it attack China with nuclear weapons during the Taiwan crises of 1954 and 1958, may have raised questions about the limits of the existing Sino-Soviet alliance. [Ref. 6:pp. 17,18]

Unsure of how willing the Soviets would be towards defending China against nuclear attack or supporting China in its Asian foreign policies against United States wishes, China began to perceive its efforts to rely upon the Soviet Union's nuclear capability as a feasible nuclear deterrent for itself as an unacceptable risk. Alice Hsieh theorizes in her book "Communist China's Strategy in the Nuclear Era", that adding to China's concerns over Soviet nuclear policy was the power struggle taking place in the Soviet Union

between Malenkov and Khrushchev. The ensuing debate between the two Soviet leaders involved, among other things, differing views on how the growing Soviet nuclear arsenal should be used and the implications for Soviet deterrence. Malenkov favored "pure deterrence" which would have involved a certain amount of disengagement from the Far East and thus a resulting loss of support for Chinese foreign policy aspirations. Krushchev favored "war fighting" deterrence and favored a more involved commitment to Asia which included a strong Sino-Soviet friendship. [Ref. 6:p. 24] That the Chinese would have preferred the war fighting deterrent policy of Krushchev is conjecture but probable. Chinese interest in the Soviets internal debate reveals a deepening Chinese interest in Soviet nuclear strategy and its implications.

Krushchev's subsequent visit to Peking in September-October of 1954 resulted in agreements on economic and scientific matters [Ref. 6:p. 25] and appears to show mutual recognition of the importance of continued Sino-Soviet relations and the potential implications and expectations of a military alliance. The resulting cooperation between China and the Soviet Union on the development of China's nuclear program supports this theory.

Changes within the Chinese People's Liberation Army may have also served to propel China towards the decision to develop nuclear weapons as a function of Chinese

incorporation of Soviet military organization and strategic thinking. The Constitution of the People's Republic of China adopted in September of 1954 reorganized the People's Liberation Army from a strictly revolutionary army into a formalized and modernized military organization. The Revolutionary Military Council was replaced with the National Defense Council and a Ministry of National Defense was established in the State Council. Thus a more formalized political and military arm of the defense establishment was developed with the intention of professionalizing the military. The reorganization of the military included compulsory military service, a hierarchy of ranks and a shift to salaried officers. [Ref. 6:p. 21] The changes reflected the ascendancy of those military leaders that wanted a military modeled after the Soviet army and capable of incorporating military doctrine that would better allow China to fight modern war.

The foregoing discussion reenforces the view that China initially developed the atomic bomb to strengthen its political aims. It was not for aggressive purposes and was less for winning a war than to prevent a war against China. Specifically, China's goal was to make China a nuclear power with enough clout to hold its own against the larger nations' interferences in its internal and external affairs. This was the reasoning behind the decision of the Chinese

Politburo to pursue an atomic weapons program on 15 January 1955. [Ref. 1:p. 39]

C. SINO-SOVIET NUCLEAR ALLIANCE (1954-1960)

Time was of the essence. Mao felt that China was facing a serious nuclear threat from the strongly anti-Communist American power across the Pacific. Having engaged in a significant alliance with the Soviet Union in order to neutralize any potential threat from the same, China now sought to use that alliance to help develop its atomic bomb. China's lack of an advanced industrial base, a strategic weapons program, nuclear research and manufacturing facilities, and virtually unknown and undeveloped natural nuclear resources meant that China would have to develop all these capabilities while simultaneously grappling with the complex nature of designing, building and fielding a nuclear arsenal. Contrary to his policy of self-reliance, Mao decided that Soviet aid was a necessary prerequisite for China to quickly obtain a viable nuclear capability. This led to a series of joint Sino-Soviet agreements that would result in substantial Soviet nuclear assistance to China during the critical early years of its nuclear development program.

In October of 1954, Sino-Soviet agreements provided for scientific and technical co-operation and the establishment

of a Sino-Soviet Scientific and Technical Commission. [Ref. 7]

The first overt indication of joint Sino-Soviet development of China's nuclear program was a 17 January 1955 announcement by the Soviet Union of its intention of giving aid to China and several East European countries including Poland, Czechoslovakia, Rumania, and East Germany to help them research peaceful uses of nuclear energy in exchange for their providing the Soviet Union with raw materials for its atomic program.

Ensuing agreements on 20 January and 27 April 1955 provided (a) for joint uranium surveys in China with the excess to be sold to the Soviet Union and (b) for Soviet assistance with nuclear physics including the supply of a nuclear research reactor with a heat capacity of 6500 kilowatts (increasable to 10,000 kilowatts) and a cyclotron to China for "peaceful" utilization of atomic energy. The Soviet Union would also, according to the terms of the agreements, provide Soviet specialists to help in assembling the reactor and particle separator and furnish necessary scientific and technical documents relating to the machines. China would also receive Soviet radioisotopes for research until its own reactor and cyclotron were capable of producing isotopes. China's reactor was to be fueled by uranium rods containing U^{235} to a two per cent enrichment and

would also use heavy water as a moderator and coolant. [Ref. 8]

August 17, 1956 saw further development in China's nuclear program with another agreement from the Soviets to aid it in building its nuclear industries and research facilities. On 15 October 1957 a New Technology for National Defense Accord was agreed to with the Soviet Union promising to provide China with a prototype atomic bomb and missiles along with related technical data. [Ref. 1:p. 41]

Clearly China's successful development of its nuclear power and nuclear weapons industry would have been sharply curtailed without substantial initial Soviet assistance. Without the primary "building blocks" of Soviet nuclear expertise in the form of scientists, matériel, and component prototypes, China may not have progressed as rapidly or as successfully in its endeavors. However, taking into account China's motivations, it is not a foregone conclusion that China would have been prevented from pursuing its nuclear program if the Soviets had not given their initial support and assistance. One way or another, China would have pursued its nuclear goals as evidenced by its perseverance after Soviet withdrawal of nuclear assistance.

D. SINO-SOVIET SPLIT (1960)

1. Causes

As critical as Soviet assistance was to the Chinese nuclear effort, the alliance between the two nations proved short-lived.

Differences included the potential uses and implications that nuclear weapons presented both militarily and politically. Krushchev was apparently concerned about Mao's referral to the United States as a "paper tiger" and his dismissal of the danger that nuclear weapons posed for global peace. Mao's cavalier attitude indicated to Krushchev that Mao was not fully cognizant of how powerful the United States was or how vulnerable the Soviet Union's position was relative to a potential nuclear threat from the United States.

In his memoirs, Krushchev accuses Mao of making insistent demands upon the Soviet Union for both nuclear technology as well as military and political support in the Taiwan crisis of 1958 threatening to embroil the Soviet Union in an unwanted confrontation with the United States. Krushchev refers to "Chinese ingratitude" for the Soviet assistance given. He was incensed by the apparent advantage taken by the Chinese of the Soviets during the anti-Soviet uprisings in Hungary and Poland in late 1956. From his perspective, the Chinese pressured a reluctant Soviet Union

into providing nuclear aid in exchange for needed Chinese communist support during a time of crisis in the communist community. [Ref. 1:pp. 60-63] This aid was promised in the 1957 New Defense Technical Accord in which the Soviets agreed to supply China with a prototype atomic bomb and missiles.

Krushchev's assessment was apparently corroborated by Nie Rongzhen, director of the Defense Science and Technology Commission and one of the masterminds of the Chinese nuclear weapons program. In his memoirs, he writes how the Chinese "seized the opportunity" and negotiated the deal with the Soviets. He takes credit for "guessing" that Krushchev would be more flexible about aid to China in light of his difficulties with Soviet satellite countries and made the suggestion to Premier Zhou Enlai that China should push for a Defense Accord with the Soviet Union. [Ref. 1:p. 63] China's push for advanced nuclear weapons coupled with Mao's view that nuclear war was not potentially devastating to the planet as a whole and that civilization would continue despite total nuclear war, put the wisdom of Soviet nuclear assistance to China in question.

Krushchev also complains of how the Chinese "tricked" the Soviet Union into providing it with military equipment for an invasion of offshore islands held by Chiang Kai-shek that was never intended to occur. He also accused the Chinese of not providing a complete captured American

missile, saying that some of the critical components were missing when the Chinese finally turned the weapon over to Soviet technicians. [Ref. 1:p. 63] It would not be incorrect to conclude that the subsequent technical cooperation between China and the Soviet Union was due more to political expediency rather than solid joint ideological and strategic goals. Despite the cooperative stance between the nations, deep differences were already beginning to divide the two.

Another source of friction was Soviet insistence that the Chinese advanced weapons development be tied exclusively to Soviet advanced military knowledge, technology, and experience resulting in Chinese dependence on Soviet willingness to share this knowledge. The constant reminder that China was dependent on Soviet largesse and strategically inferior to that nation's military and political might became increasingly unacceptable to the Chinese and a constant source of friction.

Finally, the growing ideological rifts between the Chinese and Soviets in both the function of war and the role of communism led to irreconcilable differences in political and foreign affairs. Growing Soviet power as well as the growing awareness of the destructive potential of nuclear war influenced Krushchev to consider war prevention rather than embrace the "inevitability of war" espoused by Lenin and Stalin and still supported by Mao. [Ref. 1:p. 66]

While Krushchev felt confidant that the growing military might of the socialist camp could thwart any "imperialist aims" of the Western nations, he was increasingly concerned about the fate of civilization following a global nuclear war. Mao, on the other hand, derided such concerns saying:

> If the worst came to the worst and half of mankind died, the other half would remain while imperialism would be razed to the ground:...in a number of years there would be 2,700 million people again. [Ref. 1:p. 68]

Krushchev and Mao also parted company on the doctrine of war. Krushchev moved more towards a mutual retaliation strategy similar to the West's attitude while Mao continued to hold to his "people's war" and guerilla warfare tactics and continued to discount the impact of nuclear weapons on future war. John Lewis recounts a conversation between Mao and Krushchev on the occasion of Mao's visit to Moscow in November of 1957 which illustrates the two leaders' differences on the conduct of future war. Mao took issue with the Soviet's policy of retaliating against any aggressor. He said that the Soviet Union, if attacked from the West, should fall back...retreat and hold back for several years, then push the aggressors back using guerilla tactics. Krushchev disagreed with Mao that future war would be fought along the same lines that Chinese communist forces fought against Japan and Chiang Kai-shek. [Ref. 1:p. 67] He was uncomfortable with the fact that Mao appeared to reject the military-technical changes that

advanced weaponry had made to modern warfare and Mao's seeming discounting of the political realities of a nuclear world.

Mao, for his part, viewed the Soviet's primary reliance on the military-technical aspects of war over the global political aspects as a weakening of the Soviet communist ideological leadership. Mao felt the Soviets would become more cautious in supporting national liberation struggles and therefore less supportive of Chinese political and military ambitions. This was all the more troubling since Mao believed that the Soviets had achieved greater military parity with the United States with the launching of Sputnik I in October 1957. He spoke of the "East wind [prevailing] over the West wind" and the "turning point" whereby "socialist forces [were] overwhelmingly superior to the imperialist forces." [Ref. 1:p. 68] Mao felt that the Soviets were capable of defeating the United States and that the world, especially the socialist forces, could survive a nuclear world war.

It was with increasing frustration that he watched as the Soviets grew more and more reticent about confronting the United States. Chinese suspicions of faltering Soviet assistance towards helping them develop their nuclear weapons were further underscored by Soviet moves to reduce military tensions with the United States.

This trend was especially in evidence during the Quemoy and Matsu incidents in 1958. The Soviets rendered no military assistance to Peking and only half-heartedly warned against American intervention in the area. In fact, it was not until China agreed to ambassadorial talks with the United States to resolve the situation that Moscow came out in support of Peking, saying that an attack against China would be considered an attack against the Soviet Union. [Ref. 3:p. 110] The Soviet Union waited until the crisis had abated and any real danger of being drawn into a confrontation with the United States on behalf of China had passed. This occurred in early September 1958; later in October, Krushchev further diluted this weak sign of support by referring to the Formosa Strait affair as an internal matter for the Chinese people and that the Soviet Union had no intention of interfering in a Chinese civil war. [Ref. 3:p. 110]

Continuing deterioration of Sino-Soviet allegiance was further underscored by Krushchev's call during a Twenty-first Congress of the Communist Party of the Soviet Union on 27 January 1959 for an atom-free zone in the Far East, ostensively for the avoidance of an atomic war in the region. [Ref. 3:p. 111] This was in addition to the Soviet's unilateral cessation of nuclear testing in March of 1958. At the time Krushchev called for a ban on nuclear weapons tests in an effort to preclude the spread of nuclear weapons

beyond the three powers possessing them at the time: the Soviet Union, the United States and the United Kingdom. It is perhaps not coincidental that in late 1958, the Soviets secretly decided to renege on their agreement to provide China with a prototype of an atom bomb. [Ref. 1:p. 61]

2. Implications

The events discussed above forced the Chinese to rely upon themselves. This self-reliance was accentuated by several high level policy declarations in 1958. The doctrinal split between the Chinese and the Soviets was manifested in the emergence of Chinese military doctrine in elite publications during 1958 that reiterated Mao's military philosophy. Garthoff paraphrased the doctrine as follows:

(1) It is despicable to rely on foreign countries, foreign military experts, and foreign military textbooks, and to despise one's own national military heritage.
(2) Men are what count, not weapons. Revolutionizing an army is more important than modernizing it. Politics and the inclination of people's hearts, not military technique, are what decides victory or defeat in war.
(3) Slavish reliance on the Soviet Union (by name) has had a very harmful effect on Chinese military modernization, and has caused defects and detours.
(4) The nation in arms, a vast militia, organized in communes, is the best form of mobilizing for total war.
(5) Mao's military thinking ("People's" guerrilla war) is still valid, even for modern war...
(6) "Dogmatism" is the blind following of foreign experience. Such fetters should be broken off, and combat tactics made to conform with actual conditions in China... [Ref. 3:pp. 102-103]

While discounting the long-term effects of nuclear weapons on Chinese military doctrine, Mao still recognized the need to develop a nuclear weapons capability as well as the need for Soviet assistance. However, considering their diverging political and ideological views, it was increasingly apparent that China had to prepare to develop those weapons without Soviet assistance or Soviet constraints. To that end, Mao chaired a conference of the Central Military Commission from May 27 to July 22, 1958 that John Lewis believes delineated China's nuclear weapons program. "The Guidelines for Developing Nuclear Weapons" constituted eight guidelines paraphrased as follows:

(1) Our country is developing nuclear weapons in order to warn our enemies against making war on us, not in order to use nuclear weapons to attack them....
(2) The main reason for us to develop nuclear weapons is to defend peace, save mankind from a nuclear holocaust, and reach agreement on nuclear disarmament and the complete abolition of nuclear weapons.
(3) To this end, we have to concentrate our energies on developing nuclear and thermonuclear warheads with high yields and long-range delivery vehicles. For the time being we have no intention of developing tactical nuclear weapons.
(4) In the process of developing nuclear weapons, we should not imitate other countries. Instead, our objective should be to take steps to "catch up with advanced world levels" and to proceed on all phases [of the nuclear program] simultaneously."
(5) In order to achieve success rapidly in developing nuclear weapons, we must concentrate human, material, and financial resources....
(6) It is time for science and scientists to serve the Party's policies, not for the Party's policy to serve science and scientists. Therefore, we must guarantee the Party's absolute leadership of this [nuclear weapons] project...

(7) The task of training successors [for the nuclear weapons program] is as important as the manufacture of nuclear weapons.
(8) We must set up a separate security system so as to guarantee absolute secrecy. [Ref. 1:p. 70]

In light of an impending Sino-Soviet falling out, China had begun to prepare itself to undertake its nuclear weapons program on its own under "Chinese conditions." Mao set out the task of simultaneously developing all phases of a nuclear program (fuel development, bomb design, missile technology) with the use of indigenous techniques, scientists and research. Furthermore, he set a time frame of ten years to accomplish his delineated tasks. This estimate was backed up by Nie Rongzhen.

Although China was determined to pursue its nuclear agenda on its own, China did not initiate the eventual Soviet pullout from China. While seemingly contradictory, Mao, having advocated self-reliance, still intended to make substantial use of Soviet nuclear assistance. The Soviets by 1959, however, had determined that an end in assistance to China's nuclear efforts was in order and began the systematic withdrawal of their scientists and engineers. The transfer of material was stopped, including the promised atom bomb prototype. By 1960, the Soviet withdrawal of assistance was complete and China found itself alone in continuing its nuclear development.

E. DEVELOPMENT OF THE BOMB AND THE DELIVERY SYSTEMS

1. Ambitions

As mentioned earlier, the detonation of the atomic bomb was only beginning of an ambitious undertaking to develop simultaneously the atomic bomb and the means to deliver it. Development of strategic ground-to-air and air-to-air missiles received the highest priority along with the detonation of the atomic bomb. [Ref. 1:p. 51] The decision to build missiles and deliverable bombs heavily influenced the choices the Chinese made concerning the procedures adapted for the entire nuclear program. Because they wanted a reliable weapon immediately and intended to "leapfrog" technologies (developing weapons without progressing through all or any of the normal developmental stages in-between different capabilities), China proceeded initially with the more difficult nuclear fuel process of manufacturing enriched uranium 235. It also decided upon developing the more difficult, but more reliable, implosion triggering mechanism for its first bomb. Tackling these advanced and incredibly difficult techniques early in its nuclear weapons development program enabled China to achieve phenomenal success in a relatively short period of time in developing its advanced weaponry. (refer Appendix B)

2. Personnel

Although original Soviet aid was critical, Mao understood that China had to eventually be able to indigenously manufacture and control its strategic weapon industry. Reliance on Soviet expertise and aid was only a temporary measure. China would ultimately have to rely upon itself to develop the necessary scientific personnel, industrial infrastructure and indigenous capability to build its own nuclear weapons.

With a view towards this, China had been assembling a strong cadre of nuclear scientists and engineers capable of reading Russian manuscripts. The more prominent of these scientists became the core cadre of personnel to develop China's nuclear program and most had been trained abroad. Most notable were Qian Sanqiang who studied nuclear physics in Paris and would become head of the Institute of Atomic energy and was the expert on fission in uranium. Peng Huanwu studied in Edinburgh with Nobel Laureate Max Born and was an expert in quantum field theories and cosmic rays. He would join Qian Sanqiang in China's weapons program helping to design China's first fission and fusion bombs along with two of his students Zhou Guanghao and Huang Zuqia. Also among the top cadre of scientists were Wang Ganchang who studied in Berlin and was a specialist on radioactivity and Qian Weichang, a missile expert, who had studied at the

California Institute of Technology's Jet Propulsion Laboratory. [Ref. 1: pp. 44-45]

In addition to these scientists, thousands of technicians were also trained both within China and in the Soviet Union. An elaborate bureaucracy of "Academies" and "Bureaus" was established to intertwine research and development with the education and training of China's burgeoning population of nuclear scientists and technicians.

This required tremendous coordination, massive amounts of manpower and an enormous bureaucracy to support the concurrent but separate research fields. The basic outline of the nuclear weapons organization is represented in Appendix C.

The Defense Science and Technology Commission was responsible for overall direction and control of the strategic scientific and technical resources of the military and oversaw the strategic missile program and nuclear weapons program. The commission was headed by Nie Rongzhen.

The Fifth Academy was China's missile research and development organization and was responsible for designing and building the long range missiles that would carry nuclear bombs and defend China against nuclear attack from either the United States and the Soviet Union.

The Ninth Bureau, later called the Nuclear Weapons Bureau, coordinated the development and testing of the atom bomb design with the missile systems being developed by the

Fifth Academy. This bureau oversaw several organizations. One of these was the Beijing Nuclear Weapons Research Institute which began the initial research and development of China's first atom bomb. The Beijing Institute acted as a transitional research institute until the Northwest Nuclear Weapons Research and Design Academy (also known as the Ninth Academy) had been built and could carry on the designing and manufacturing of the bomb. The Beijing Institute later took on the primary tasks of training and initial weapons research. [Ref. 1:p. 141]

The Second Ministry of Machine Building ran the strategic weapons industry and consisted of several bureaus some of which are described in the following paragraph. Song Renquiong was the initial minister until 1960 when Liu Jie took over.

It incorporated the Ninth Bureau discussed above, as well as the Geological bureau responsible for uranium prospecting, the Mining and Metallurgy Bureau responsible for controlling the major uranium mines and the facilities processing the uranium, the Fuels Production Bureau in charge of nuclear fuels, the Construction Bureau in charge of building the factories and installing machinery, and the Equipment Manufacturing Bureau, responsible for the manufacturing of materials, instruments and other equipment. [Ref. 1:p. 55]

Clearly, China was fully capable of supporting its ambitious agenda towards nuclear independence and had developed the hunman potential and the organizational infrastructure to do so.

3. Early Accomplishments

The major thrust of China's military industry from 1956 to 1981 was the development and deployment of its first generation nuclear-armed missiles.[Ref. 9:p. 6]

To achieve this, the Chinese undertook tasks on all phases of their nuclear weapons program simultaneously, from uranium mining to missile design to atom bomb development. They were able to do this by creating "national lead centers to anticipate and solve critical problems before mass-production units became operational. The centers would give guidance and training to the emerging mass-production facilities and serve as their backup research unit", several of which were described above. [Ref. 1:p. 94] In this way, the Chinese were able to partition their nuclear weapons program into separate parts, develop the different phases independently but concurrently, then reassemble the different phases to bring their nuclear bombs and delivery systems on line simultaneously or at least with shorter lead times between developments. The effect of this strategy was a remarkable advancement in strategic weapons development.

Since the Chinese were basically starting from scratch, they initially relied heavily on foreign technologies rather than inventing or discovering the basics of nuclear weapons design themselves. This initial strategy made Soviet assistance crucial. Soviet cooperation not only provided the Chinese with examples of rudimentary weapon systems but also gave them the basics on processing nuclear fuel, designing and manufacturing a triggering device, building an atom bomb and ultimately designing and manufacturing the missile system capable of delivering nuclear weapons.

The Soviets only provided the Chinese with the basic blueprints and introductory technical training to initially begin their program. The 1960 Sino-Soviet split however, cut off further advanced assistance at a delicate stage...just when the Chinese were beginning to manufacture and design the components to build their bomb. They were essentially left with a few blueprints, some rudimentary missiles and a myriad of unanswered questions about processing and manufacturing the essential elements for their nuclear bombs and missiles. Despite this handicap, the Chinese took the knowledge they had accumulated from the years of Soviet assistance and proceeded with the development of their strategic weapons.

Since China was concerned primarily with defending itself against nuclear attack from the United States and/or

the Soviet Union, it concentrated its efforts on missile systems capable of defending itself against these threats.[4] With this in mind, the Chinese leadership in 1956, assigned the Fifth Academy with the task of developing long range missiles capable of reaching the United States. [Ref. 9:p. 7] These missiles were being developed at the same time as the Ninth Bureau was working on China's first atomic bomb. Utilizing first the R-1, a Soviet missile with a two hundred seventy kilometer range, as a prototype, the Chinese attempted to begin work on their first missile. It was too simple a design for the purposes of the Chinese however. It was not until Krushchev, under the Sino-Soviet New Defense Technical Accord of October 1957, agreed to sell China two R-2 missiles with a range of five hundred ninety kilometers, that the Chinese were able to begin their ballistic missile efforts. [Ref. 9:p. 8]

The Soviet R-2 (known to the West as the V-2), was used primarily for educational purposes by the Chinese for learning how to manufacture, test and launch a missile

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[4] It would be useful here to point out the differences between Chinese definitions of missile ranges and the United States definitions. The Chinese only consider missiles with ranges above 1,000 kilometers as strategic. Chinese missile ranges are defined as follows: short-range, less than 1000 kilometers; medium range, 1000-3000 kilometers; long-range, 3000-8000 kilometers with a sub-category of intermediate-range of 3000-4,800 kilometers; and intercontinental-range, over 8000 kilometers. The United States-Western definition of "medium-range" missile is one that can carry a 450 kilogram payload 260 kilometers or more.

system. Redesignated the 1059, the Chinese launched their version of the R-2 on November 5 of 1959. These missiles were conventionally armed. [Ref. 9:p. 8]

As progress was made towards the testing of its first atomic bomb, China began to work on a series of Chinese ballistic missiles capable of reaching American targets in Japan and capable of carrying a nuclear payload. It must be noted that the explosion of the first atom bomb on October 16, 1964 marked China's induction into the nuclear club. But the explosion of its air dropped hydrogen bomb on 17 June 1967 heralded China as a nuclear power to be reckoned with.

The detonation of the three megaton thermonuclear device made the development of nuclear armed long-range missiles viable for the Chinese nation. The combination of massive warhead yields with fairly accurate delivery systems became an achievable goal for the Chinese nuclear weapons scientists. With this in mind, the Deng Feng (East Wind) series of missiles began development as early as 1958. These were Chinese developed land-based missiles, the first of which was to have a range of two thousand kilometers and a payload of one thousand five hundred kilograms and was designated the Deng Feng 1. [Ref. 9:p. 13]

The Deng Feng 1 was patterned after the Soviet R-12 missile which Chinese rocket students studying at the Moscow Aviation Institute had managed to gain some information

about. The R-12 was not sold to the Chinese and all development of the Deng Feng 1 was based on the knowledge that the students were able to cull from their Soviet instructors and bring back to China surreptitiously. The Deng Feng 1 was fueled with a storable liquid propellant and had a lift-off thrust of sixty four tonnes but still did not meet the requirement of reaching the continental United States that the Chinese government was striving for.

Work on the Deng Feng 3, an intercontinental missile with a projected range of ten thousand kilometers (thus able to reach the United States), was begun in November of 1961. However, the project proved too ambitious for the fledgling missile programmers and the economic crises of the Great Leap Forward coupled with improving relations with the United States and souring relations with the Soviet Union, resulted in the canceling of the intercontinental ballistic missile, temporarily. Scaling back their ambitious missile program and returning to a more realistic plan of incrementally designing longer range missile systems, the Chinese continued to concentrate on the shorter range missiles, the Deng Feng 1 and Deng Feng 2. It was not until June 1964 that a successful launch of a redesigned Deng Feng 2 missile was achieved. This missile had a shorter range and smaller payload than the yet to be successfully tested Deng Feng 1, but it marked a continuing advancement by the Chinese in their missile program. [Ref. 9:p. 15]

One of the biggest difficulties facing the Chinese was the development of a missile capable of carrying a nuclear device. The atom bomb exploded on 16 October 1964 weighed one thousand five hundred fifty kilograms, still too heavy for the projected one thousand five hundred kilogram payload of the redesigned Deng Feng 2 already underway. Realizing the shortcomings of their successful missile, the Chinese decided to redesign the as yet untested Deng Feng 1, extending its operable range to two thousand five hundred kilometers with a payload of two thousand kilograms. This would enable the missile to reach United States bases in the Philippines and carry the hydrogen bomb then under development. The newly designed Deng Feng 1 was renamed the Deng Feng 3 (taking over the designation of the now defunct intercontinental ballistic missile) and was successfully launched on December 26, 1966. The Chinese had acquired an intermediate range ballistic missile capable of carrying a nuclear device. [Ref. 9:p. 16]

The Chinese continued to improve the Deng Feng 3 increasing its range to two thousand six hundred fifty kilometers by 1971. It was this version of the Deng Feng 3 that China eventually sold to Saudi Arabia in 1988 after it had deployed a Deng Feng 3A capable of reaching two thousand eight hundred kilometers in 1986.

The successful tests of its medium-range (Deng Feng 2A) and intermediate-range (Deng Feng 3) missiles finally

made the development of an intercontinental ballistic missile an attainable goal. As early as March 1965, the organization responsible for carrier rocket research, (the First Academy), set a goal of deploying four types of missiles in eight years. Two of these missiles were the medium- and intermediate-range Deng Feng 2A and the Deng Feng 3 and were already well advanced. The next two projected missiles represented a systematic advancement in missile range towards their long term dream of an intercontinental missile capable of reaching the United States. [Ref. 9:p. 17]

Research and development on the Deng Feng 4, a two-stage missile with a range of four thousand kilometers and a payload of two thousand two hundred kilogram payload capable of hitting United States bases on Guam, began in March 1965. It was successfully flight tested in January 1970. Sino-Soviet military confrontations resulted in the Deng Feng 4 being upgraded to a range of four thousand seven hundred fifty kilometers and therefore capable of reaching Moscow. This version became operational in 1980. [Ref. 9:p. 17]

Research on the Deng Feng 5, an intercontinental missile with a projected range of twelve thousand kilometers and a payload of three thousand kilograms, was begun simultaneously with work on the Deng Feng 4. However, work on the Deng Feng 5 was more difficult because it utilized many new technologies that the Chinese had to develop while

the Deng Feng 4 used already proven components used in the Deng Feng 3. (Indeed, the first stage of the two stage Deng Feng 4 was a Deng Feng 3 and it also utilized the Deng Feng 3's propellant and guidance system.) The two stage Deng Feng 5, on the other hand, required larger engines, a different propellant, vernier combustion chambers for attitude control on its second stage, a gyro-stabilized platform, an on-board computer for flight control and a new body made of a less easily welded aluminum-copper alloy. [Ref. 9:p.18] The delays caused by these new technologies resulted in the Deng Feng 5 being flight tested over a year and a half after the Deng Feng 4 in September 1971.

The worsening relations between the Chinese and the Soviets and the subsequent invasion of Afghanistan in 1979, resulted in the Deng Feng 4 and Deng Feng 5 being deployed before they were completely operational. In the case of the Deng Feng 5 it was deployed before its silos were even complete, but the perceived threat to China by the Soviets directed the accelerated deployment of the missiles. Meanwhile, continued upgrading of the Deng Feng 5 missile was carried out as late as the early 1980's extending the range to thirteen thousand kilometers. [Ref. 9:p. 19]

Despite the setbacks and false starts, the Chinese showed remarkable resiliency and perseverance. They developed from inauspicious beginnings a viable strategic weapons system in less than thirteen years and with

continued improvements had a credible nuclear defensive force by the 1980's. This achievement has been unmatched by any other nuclear power.

F. CONCLUSION

From this recital of China's nuclear development a conclusion of great importance to American policy makers is inescapable. China's pursuance of a nuclear capability was as much an achievement of national self-esteem as it was a political-strategic goal. It pursued its goals with a single-mindedness that was bolstered by tremendous national will, strong organizational capability, and superlative dedication to rigorous achievement. It did this by using small, highly specialized design teams, rigorous prototyping and testing, and high quality assurance. Despite its underdeveloped science and technology industries, it managed to develop an advanced nuclear industry that in many ways was as responsible for developing its technological base as it was responsible for providing an adequate defense of China. Finally, China undertook its nuclear development in the face of a perceived nuclear threat from the United States, not as an effort to become a nuclear super power. Nuclear weapons were developed and deployed as an addition to their defensive capability not as part of a separate nuclear strategy, underscoring their initial intentions of protecting themselves from a nuclear threat.

III. NUCLEAR POLICIES

A. NUCLEAR POLICY INFLUENCES

China's nuclear policies can be explained partially by its affirmed security objectives, foreign policy goals, and economic goals as well as taking into account its nuclear capabilities. (Its defense policies will be reviewed in chapter four along with its current nuclear capabilities.) Unfortunately, China's characteristic reticence in discussing its nuclear capabilities, strategies and policies make a clear understanding of its intentions difficult to discern. Because of China's "shyness", one must divine its nuclear agenda by considering what it has done compared to what it has said it would do with its nuclear weapons. Moreover, understanding how China views itself in relation to the rest of the world as well as exploring its domestic political and economic goals for self-sufficiency will help to explain its security concerns and how those concerns have affected its nuclear policies and development.

1. Security and Foreign Policy Objectives

a. Introduction

The role of China as the "Middle Kingdom" has evolved from its ancient view of itself as the crossroads bridging the expanse between the Western nations and the Far

Eastern nations to its more recent role as the "third most important power"; a nation counterbalanced between the two superpowers represented by the United States and the former Soviet Union. [Ref. 10]

Its importance as an independent nuclear power notwithstanding, changes in China's position on a number of nuclear issues have continued to be influenced by its changing positions on economic policy, the end of the Cold War, and its increasing military capability; all of which have brought about a China more prone to embrace western ideals on nuclear proliferation and arms control.

In all of its manifestations however, it has sought to remain aloof and independent of entangling alliances and has struggled to minimize the impact of foreign influences and interferences into its internal affairs. Deng Xiaoping's characterization of socialism with Chinese Characteristics has been a major guide in modern Chinese developmental policy as well as foreign relations:

> Our modernizations must proceed from China's actual situation. Be it revolution or construction, we must pay attention to studying and emulating foreign experiences. However , mechanically copying other countries' experiences and patterns has never succeeded. We have learned many lessons in this regard. One basic conclusion we have drawn from our long historical experiences is to...follow our own course....
>
> Independence, self-reliance, and charting our own course are the political foundations of the theory on building socialism with Chinese characteristics. [Ref. 11:p. 28]

Essentially, Deng meant that China must do what is good for China and that its modernizations and its relations must proceed with this basic tenet in mind. This philosophy underlies China's independence in forming its own nuclear policies that do not always coincide with the west's notion of responsible nuclear stewardship.

Concurrently, China has been consistent in its foreign policy polemic by denouncing "imperialism" and "hegemonism", whether Soviet or American (or more recently, developed nations versus developing nations). It disparages the resulting interference into a nation's sovereignty that it believes these two nations' and their allies' polices have engendered and refuses to be bullied into making accessions on policy matters.

The above characteristics lend themselves to China's aligning itself, in spirit, with the developing world; often speaking in defense of the underdeveloped nations' concerns against developed nations' policies. This perception of itself as a developing nation resisting the attempts by developed nations to limit and direct its military as well as its economic and foreign policy goals has influenced China's position on all nuclear issues such as proliferation, weapons sales and arms control.

In support of its foreign policy goals, China's security objectives have been described as:

- Building itself into a country that is economically prosperous, politically stable and militarily sufficient in its own defence, capable of ensuring that its sovereignty and territorial integrity be respected and not subject to violation from the outside;

- Laying particular stress on a good neighbor policy with the purpose of establishing friendly and cooperative relations with neighboring countries so that the people on both sides of the border can live in peace and, hopefully, in harmony;

- Developing friendly relations with all countries in the world on the basis of the "five principles for peaceful coexistence,"[5] to work together with all peace loving forces towards the relaxation of international tension and the keeping of world peace, to strive for international economic security in order to strengthen international security as a whole and thus to create a lasting and peaceful environment for China's own construction. [Ref. 12]

b. Early Nuclear Policy Influences

The new People's Republic of China was very concerned with its inability to fend off the emerging superpowers' interferences into its national development. The prestige that nuclear weapons gave these nations weighed heavily in China's decision to develop some nuclear force of their own. This reason for China's developing a nuclear capability was succinctly iterated by Deng Xiaoping in 1957:

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[5]. The five principles of coexistence were first laid out in a 1954 agreement between China and India and proclaimed: "mutual respect for each other's territorial integrity and sovereignty, mutual nonaggression, mutual noninterference in each other's internal affairs, equality and mutual benefit, and peaceful coexistence." Initially applicable to socialist states in Asia and Africa, the principles have since been applied to relations with all nations including the United States. They remain a guiding focus in China's modern day foreign policy.

> The Soviet Union has the atom bomb. Where does the significance lie? It lies in the fact that the Imperialists are afraid of it. Are the Imperialists afraid of us? I think they are not...The United States stations its troops on Taiwan because we have no atom bombs or guided missiles. [Ref. 13]

The political power and implied military security attached to the development of a Chinese atom bomb was a major factor in the newly emerging republic's pursuit of a nuclear capability.

Another determining factor was the concurrent technological and scientific development that would occur along with the development of the atom bomb. China, unlike the western nations, did not undergo the technological and economic advancements the Industrial Revolution of the nineteenth century generated because its dynastic rulers prevented modern influences from reaching China. They opted instead to keep China solidly in its ancient traditions and thereby maintain control over China. Subsequently, the newly emerging communist nation found itself woefully underdeveloped and poor. This reality was poetically depicted by Qian Sanqiang, one of China's foremost atomic nucleus physicists and one of the original scientists working on China's fledgling nuclear program:

> For more than a century, the Chinese nation had remained backward and vulnerable to attack, had been invaded and ravaged. Could we impute this to China's poor and backward economy? To its inability to develop any sort of enterprise or cause? Could it be said that China lacked people of lofty ideals or that the Chinese were inferior in intelligence? Definitely not. The root for this historical

humiliation lay in the ignorance, corruption and incompetence of the rulers of past dynasties....

...In November 1949, after the Chinese Academy of Sciences was established, it began at once, with effective support of the government, to change the previous situation so that science could truly serve the country's industrial, agricultural and defence construction, the people's health and their cultural life. The late Premier Zhou Enlai gave a special instruction: It is necessary to develop new disciplines, such as atomic nucleus science and experimental biology. Before long, the first atomic nucleus science research organization, the Modern Physics Research Institute (later renamed the Atomic Energy Research Institute) under the Chinese Academy of Sciences, was established. [Ref. 14]

Accordingly, the development of the Chinese atom bomb became a key element in Mao Tse-Tung's goal of establishing China as an industrialized, influential, and economically viable nation independent of western alliances. Mao's goals remain the cornerstone of China's modern day security objectives and China's evolving nuclear capability remains a fundamental component of the achievement of its security and foreign policy objectives.

China's security goals also influenced its consistent "no-first use" pledge regarding the utilization of its nuclear weapons. China clearly delineated its position regarding its reasons for developing nuclear weapons and its defensive intentions vis-à-vis their use in a statement released on 16 October 1964, the day of their first atom bomb detonation:

> ...This is a major achievement of the Chinese people in their *struggle to strengthen their national defence and oppose the U.S. imperialist policy of nuclear blackmail and nuclear threats....*

...To defend oneself is the inalienable right of every sovereign state. To safeguard world peace is the common task of all peace-loving countries. China cannot remain idle in the face of the ever-increasing nuclear threats from the United States....

...The atomic bomb is a paper tiger. This famous statement by Chairman Mao Tse-tung is known to all. This was our view in the past and this is still our view at present. China is developing nuclear weapons not because it believes in their omnipotence nor because it plans to use them. On the contrary, *in developing nuclear weapons, China's aim is to break the nuclear monopoly of the nuclear powers and to eliminate nuclear weapons. China is developing nuclear weapons for defence* and for protecting the Chinese people from U.S. threats to launch a nuclear war....

...The Chinese Government hereby solemnly declares that *China will never at any time or under any circumstances be the first to use nuclear weapons*....

...China's success in making nuclear weapons is a great encouragement to the revolutionary people of the world in their struggles and a great contribution to the cause of defending world peace. On the question of nuclear weapons, China will not commit the error of adventurism or the error of capitulationsism....

...more and more countries are coming to realize that *the more exclusive the monopoly of nuclear weapons held by the U.S. imperialists and their partners, the greater the danger of a nuclear war*. They are very arrogant when they have such weapons, they will not be so haughty, their policy of nuclear blackmail and nuclear threats will not be so effective, and the possibility of complete prohibition and thorough destruction of nuclear weapons will increase.

...If those countries in possession of large numbers of nuclear weapons are not even willing to undertake not to use them, how an they expect countries not yet in possession of such weapons to believe in their sincerity for peace and to refrain from taking defensive measures that are necessary and within their capabilities...?

...The Chinese Government will, as always, *exert every effort to promote, through international consultations, the realization of the lofty aim of complete prohibition and thorough destruction of nuclear weapons*. Until that day comes, the Chinese Government and people will firmly and unswervingly follow their own path to strengthen their national defence, defend their motherland, and safeguard world peace.... (refer to Appendix D for full text) [Ref. 15]

This statement declared the positions on nuclear issues that China was to take for the next two decades.

Specifically, it called for the complete elimination of all nuclear weapons by all countries, and until this occurred, it defended the right of all nations to pursue nuclear weapons development and called for a "no first-use" pledge by all nuclear states. It laid the blame for global nuclear tension at the feet of the United States, alluding to the "nuclear blackmail" the United States engaged in during the 1950's. Rapidly deteriorating Sino-Soviet relations culminating in the border clashes of 1969 eventually included the Soviet Union in Chinese general disparagement of superpower attempts to monopolize the world through nuclear superiority. The foregone conclusion for China was that it had to develop a viable nuclear capability if it were to succeed as an independent nation in a world dominated by the nuclear superpowers.

c. Current Nuclear Policy Influences

The subsequent emergence of China as a medium nuclear power reinforced its self-appointed role as a counterweight against superpower hegemony and provided China with the added political dimension of being capable of defending itself against superpower influence whether political or military.

China's security objectives developed into a foreign policy of "flexible" neutralism and pragmatism that emphasized the sovereignty of a nation in all its affairs,

linked China's interests with those of the third world and, while still warning against hegemonism from the superpowers, sought to develop better and equivalent relationships with both the Soviet Union and the United States, in effect establishing a more balanced triangle of foreign relations between the three largest nuclear powers in the world.

Former Vice-Premier Wu Xuechien distilled China's foreign policy objectives during the 1980's into a "five-point independent foreign policy of peace":

- Opposing hegemonism and working to maintain peace,
- deciding policy issues pragmatically case by case,
- avoiding alliance or strategic relationships with the Soviet Union and the U.S.,
- strengthening cooperation with Third World countries, and
- cooperating on economics, trade, science and technology with *anyone*. [Ref. 16:p. 5]

This was clearly carried through in its sometimes conflicting nuclear proliferation and arms control positions. China, while supporting the disarmament negotiations between the superpowers and acceding to nuclear nonproliferation instruments, concurrently maintained its persistent policy on arms sales that has caused substantial tension between it and the United States.

2. Influence of Economic Goals

While China's nuclear capabilities increased and it achieved a viable deterrent force for its purposes; economic

goals delineated in Deng Xiaopeng's "four modernizations", (agriculture, technology, industry, defense), were resulting in China's adoption of socialist practices (with Chinese characteristics of course). Subsequently, the 1980's brought about a shift in China's foreign policy focus from one of a defensive ideological struggle against superpower hegemony to a more pragmatic concern with economic expansion and the global stability that its economic goals required.

Indeed, Paul Kreisberg, Senior Associate at the Carnegie Endowment for International Peace, surmised in 1988 that:

> ...Coastal economic development places even greater emphasis on enticing foreign investment into China, developing export markets for the goods these areas produce, and on preserving good relations with potential sources for both investment, technology, and markets--- the U.S., Japan, Western Europe, and the Asian [Newly Industrializing Countries. This is the fundamental policy rudder which has been and seems almost certain to continue to guide Beijing's policies on all major questions over the next five [to] ten years at least. [Ref. 16:p. 17]

Improving relations with the Soviet Union brought about by the Gorbachev era of perestroika and glasnost, as well as perceived weakening of the United States economic position lent itself to a general relaxing of tensions between the three countries as economic concerns became a major foreign policy concern globally. China toned down its anti-West polemic and sought cooperation with all nations without compromising its basic foreign policy positions.

These basic points were recently reemphasized by Chinese Vice-Premier Zhu Rongji:

> ...The goal of China's foreign policy is to safeguard world peace, promote common development and *create a favorable international environment for the country's economic reforms, opening up to the outside world and its modernization drive....*
>
> Over the past few years, the international situation has undergone drastic and profound changes rarely seen in times of peace...*The tense confrontation between the two military blocs has been removed, and the world continues to move towards multipolarity....Economic invigoration has become the main trend of the time...*With the upsurge of multi-layered economic cooperation, Asia has maintained a strong momentum of economic growth.
>
> *However, we can not fail to note that the planet on which we live is far from tranquil...Power politics and hegemonism remain the major obstacles to world peace and development.* With various forces undergoing realignment and new contradictions intertwining with old ones, regional turbulence has stood out more prominently.
>
> While economic factors have begun to be weighed more heavily in international relations, trade protectionism is on the rise. *Global economic development is extremely unbalanced, with the gap between the North and the South further widening.* In this changing international situation, China is unswervingly pursuing an *independent foreign policy of peace...*
>
> *...China will not enter into an alliance with any country or bloc of countries, nor will it participate in any military bloc,* and...China has always been opposed to hegemonism and power politics. *It will never seek hegemony or engage in expansionism....*
>
> *...To establish and develop friendly relations and cooperation with all countries in the world on the basis of the Five Principles of Peaceful Coexistence is a cornerstone of China's foreign policy....*
>
> ...In handling our relations with neighboring countries, we have always pursued a policy of good-neighborliness and have made unremitting efforts to secure long-term stability and mutually-beneficial cooperation in the region...
>
> *China attaches great importance to solidarity and cooperation with developing countries...*In whatever way the international situation may change, *China will, as always, support the legitimate rights and interest of third world countries in safeguarding national*

independence and state sovereignty and seeking economic development....

We hope to see our relations with [western] countries restored and developed on the basis of mutual respect, *non-interference in each other's internal affairs, equality and mutual benefit and in the spirit of seeking common ground while reserving differences...*

As a permanent member of the U.N. Security Council, China shoulders a special responsibility for world peace and stability. *It will continue to work with the international community in an effort to facilitate political settlements of regional conflicts and international disputes, promote the process of world disarmament and arms control, secure common economic development of all countries in the world and increase cooperation in environmental protection, human rights* and other fields....

China stands for the establishment of a just and rational new international order of peace and stability on the basis of the Five Principles of peaceful coexistence....[Ref. 17]

Zhu Rongji emphasizes one of the most important influences in China's current foreign policy and, coincidentally, in its nuclear policies: China's economic expansion and the importance of international cooperation in the success of China's modernization efforts.

B. NUCLEAR PROLIFERATION ISSUES

China's positions on some nuclear nonproliferation issues have undergone subtle changes over the years since its acquisition of a nuclear capability. It has continued however, to make a distinction between "medium" nuclear powers such as itself, France and Britain and the nuclear superpowers of Russia and the United States. It applies a different set of standards to the nuclear superpowers, describing them as the real threat to world stability and

safety, not the smaller and emerging nuclear powers. This was subtly alluded to by delegation head Yu Peiwen at the 1981 Conference on Disarmament in Geneva:

> China is opposed to major power nuclear monopoly. Like many other peace-loving countries, China does not advocate or encourage nuclear proliferation, and we are emphatically opposed to any production of nuclear weapons by racist and expansionists such as South Africa and Israel.
>
> The nuclear-weapons states should recognize the fact that the nonnuclear-weapon states find themselves menaced by the danger of nuclear war and nuclear threat and that it is the strong demand of the peoples of the world that the superpowers halt the arms race and carry our nuclear disarmament. The nuclear weapons states should unconditionally guarantee not to use or threaten to use nuclear weapons against the nonnuclear-weapon states without further delay, and at the same time, they should take effective measures to carry out nuclear disarmament until the ultimate goal of complete prohibition and total destruction of nuclear weapons is achieved. China has unilaterally undertaken the unconditional commitment not to use or threaten to use nuclear weapons against nonnuclear-weapon states and suggest that, when an international convention on security assurances is elaborated, the inclusion of such commitments should be taken into consideration. [Ref. 18]

This has often put China in direct opposition to global efforts to prevent the proliferation of nuclear weapons capabilities. Despite its adamant position, China has made a few accessions to non-proliferation efforts of late. A look at these changes and their probable causes may help to explain China's singular opaque position on nuclear proliferation issues.

1. Nuclear Test Bans

One issue that China has not budged on is its disapproval of nuclear test bans, comprehensive or otherwise. China expressed great dissatisfaction with the United States' and the former Soviet Union's nuclear policies of the 1950's. As was clearly voiced in its declaratory statement of 1964, China interpreted their initial efforts to limit the nuclear development of other nations through the promulgation of test ban treaties and nuclear proliferation controls as a direct attempt to keep China weak and dependant. Since China did not have any nuclear weapons, any effort on the part of the former Soviet Union and the United States to prevent their development was naturally met with strong resistance.

a. Limited Test Ban Treaty

The tripartite treaty between the United States, the former Soviet Union and Britain called for the prohibition of nuclear explosions in the atmosphere, in outer space, and underwater. It was signed in Moscow on 5 August 1963. [Ref. 19]

The test ban was opposed by China who viewed the Soviet Union's support for a nuclear test ban as an abandonment of a "coordinated strategic doctrine for all socialist states." [Ref. 1:p. 193] It was shocked that the Soviet Union would "collude" with the United States in an

attempt to prevent China from developing nuclear weapons and quickly denounced any nuclear test ban proposal as interfering in a sovereign nation's right to build an adequate defense and viewed the treaty as destabilizing because it would:

> bind all socialist countries except the Soviet Union and all countries subject to aggression, without hindering the United States from proliferating its nuclear weapons among its allies and countries under its control. The tripartite treaty can in no way prevent the United States from carrying out nuclear proliferation, and it tends to strengthen the aggressive forces of the imperialist camp. Can this treaty prevent U.S. imperialism from proliferating its nuclear weapons, and the technical data for their manufacture, among the West German revanchist and other allies of the United States and countries under its control? No, absolutely not.... [Ref. 23:p. 13]

China's 1963 arguments against the limited test ban established its main disagreements with any test ban that did not concurrently prevent the United States from using, testing or proliferating nuclear weapons or link nuclear test bans with the elimination of all nuclear weapons in general.

China has never acceded formally to the Limited Test Ban Treaty, although unofficially it has not conducted any atmospheric testing since 16 October 1980 and in 1986 declared that it would no longer conduct atmospheric nuclear tests. [Ref. 20]

b. Comprehensive Test Ban

Prior to its first nuclear detonation, China called for the elimination of all nuclear weapons and an end to nuclear testing. [Ref. 21] In effect, China was advocating a comprehensive test ban. However, after its first detonation, China was resolute in not acceding to any limitations on her potential to develop nuclear weapons. Just as it denounced the Limited Test Ban Treaty, it was against a Comprehensive Test Ban unless it was specifically tied to negotiations for the complete elimination of all nuclear weapons. Then Vice-Premier Deng Xiaoping stated in 1979:

> We stand for destroying all nuclear weapons completely. However, the nuclear powers have no right to prevent nonnuclear countries from possessing nuclear weapons unless these powers commit themselves to destroy their nuclear weapons completely or guarantee not to be the first to use them. [Ref. 22]

In this respect, China remains defiant in the face of the majority opinion of most developing nations who have signed on to the Nuclear Non-proliferation Treaty and have cast the Comprehensive Test Ban Treaty as one of the most important steps towards keeping the treaty viable after 1995. China is not alone in this position, none of the other nuclear countries, most specifically the United States, have been able to negotiate a satisfactory conclusion to the comprehensive test ban dilemma. However, China is different from these nations in that it will not even consider any

limits on nuclear testing without a concurrent global disarmament of nuclear weapons. Since this is unlikely to occur, it remains secure in its "ethical" argument for the elimination of nuclear weapons without fear of having its continued nuclear development curtailed in the interim.

2. Nuclear Non-proliferation Treaty

Perhaps one of the most significant events in China's nuclear policy agenda has been its formal acceptance of the Nuclear Non-proliferation Treaty in January of 1992. This was a sharp departure from its refusal to sign the treaty in 1968 on the grounds that it:

> did not go far enough to keep the superpowers from upgrading and expanding their nuclear arsenals while unfairly preventing nonnuclear countries from developing nuclear power for peaceful uses. [Ref. 31:p. 4]

Changes in the international environment, as well as changes in China's attitudes on nuclear proliferation and pragmatic considerations all conspired to bring about this substantial shift in Chinese nuclear policy.

a. Early Proliferation Attitudes

China's main reason for developing a nuclear weapon's capability was its fear of a nuclear attack from the United States as was discussed in Chapter II. It believed that the nuclear monopoly of the United States in the 1950's and 1960's posed a real threat to Chinese security interests. Proliferation was desirable because it would allow, initially, the Soviet Union and subsequently,

the other socialist states the opportunity to develop an atomic capability thus ending America's exclusive nuclear power. It viewed the situation of a single nuclear power as inherently destabilizing, a perception that to its chagrin, was not alleviated by the acquisition of nuclear weapons by the Soviet Union.

The Soviet Union's subsequent cooperation with the United States to declare a Partial Test Ban, though initially viewed by the Chinese as an attempt to prevent German development of nuclear weapons, rapidly disillusioned Chinese hopes of a complete prohibition of nuclear weapons when it realized the combined efforts of the three nuclear powers were to prevent other states from developing a nuclear capability. [Ref. 23:p. 10]

Soviet arguments in 1959 that Chinese nuclear development was unnecessary because of Soviet protection; therefore the sharing of nuclear technology with China was not needed, contributed to the Sino-Soviet split. This was described by a Chinese government spokesman on the occasion of the Soviet Union's 1959 communique to China denying it further assistance on its nuclear bomb:

> The whole course of events amounts to this: First the Soviet Government tried to subdue China and curry favor with U.S. imperialism by discontinuing assistance in an attempt to induce China to abandon its solemn stand. Failing in all this, it has brazenly ganged up with the imperialist bandits in exerting pressure on China. In view of all the above, China has long ceased to place any hope in the Soviet leaders in developing its own

nuclear strength to resist the U.S. nuclear threats. [Ref. 24:pp.351,2]

It also crystallized Chinese perceptions that the only way to break the United States' nuclear monopoly was the proliferation of nuclear weapons to other nations, starting with its own indigenous efforts:

> With regard to preventing nuclear proliferation, the Chinese Government has always maintained that the arguments of the U.S. imperialists must not be echoed, but that a class analysis must be made. Whether or not nuclear weapons help peace depends on who possesses them. It is detrimental to peace if they are in the hands of imperialist countries; it helps peace if they are in the hands of socialist countries. It must not be said indiscriminately that the danger of nuclear war increases along with the increase in the number of nuclear powers. Nuclear weapons were first the monopoly of the United States. Later, the Soviet Union also came to possess them. Did the danger of nuclear war become greater or less when the number of nuclear powers increased from one to two? We say it became less not greater. [Ref. 24:p. 347]

It is interesting that China made a distinction between who had nuclear weapons and the resultant effect that this would have. It showed some latent consciousness on the part of the Chinese of the potential liability of a nuclear armed weapon in the wrong hands. However, China did not recognize its contradiction and continued to support the philosophy that nuclear proliferation was a good thing over the next two decades.[6]

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[6] Beginning in the 1970's China would later revise its exclusionary position and endorse the spread of nuclear weapons to any "peace-loving" nation because it would increase the probability of deterring an American nuclear attack and would accelerate a general nuclear disarmament. [Ref. 23]

The tensions between China and the Soviet Union during the 1970's did little to change China's perception of nuclear proliferation. As Soviet and American concerns over avoiding nuclear war began to converge and the two nations attempted to settle disputes amicably whenever possible, China repudiated what it viewed as the Soviet Union's betrayal of the communist revolution. China saw nuclear proliferation as not only the means to reduce both nations' influence in the world, but hoped to also prevent Soviet-American cooperation by multiplying the number of independent nuclear states in the world and keeping the two superpowers at each others throats in an effort to maintain their respective positions of power. [Ref. 23:p. 35]

The death of Mao and the shifting of foreign policy objectives supporting violent third world revolutions, to Deng Xiaoping's policies of stabilization and modernization began to temper Chinese proliferation stances:

> ...The development of nations with different historical, economic, political, and cultural backgrounds is uneven. Essentially, the efforts exerted by people of various countries to attain socialism and build a socialist society are independent movements themselves. Marxists in various countries should take the initiative in their own hands, rely on themselves, and, proceeding from their actual needs, count on their own people and find their own ways. There will not be a unified mode or centralized guiding center. [Ref. 11:p. 27]

The 1980's saw a visible softening of Chinese attitudes on nuclear proliferation issues which began with

tacit Chinese agreement on the spirit of the Nuclear Non-proliferation Treaty although it did not agree with the document itself:

> We are critical of the discriminatory treaty on the nonproliferation of nuclear weapons, but we do not advocate or encourage nuclear proliferation. We do not engage in nuclear proliferation ourselves, nor do we help other countries develop nuclear weapons. We actively support all proposals that are truly helpful to realizing nuclear disarmament, terminating the nuclear arms race, and eliminating the threat of nuclear war. [Ref. 25:pp.351,2]

Economic concerns appear to have had as much of an impact as foreign policy positions in China's gradual acquiescence to the treaty. China's need for enormous amounts of energy to drive its modernizations programs gave nuclear energy technology top priority in its Sixth and Seventh year plans (1981-1990). Minister of Nuclear Industry Jiang Xinxiong announced plans projecting the building of ten nuclear power plants with a projected generating capacity of ten thousand megawatts by the year 2000. [Ref. 26]

Chinese desires to import foreign equipment and engineering services and the government's allocation of one hundred million American dollars in turn elicited American nuclear power industries interest in providing the services and equipment. Unfortunately, the absence of a nuclear cooperation agreement with China at first prevented American nuclear industries from participating in Chinese projects.

The subsequent 1985 Agreement on Nuclear Cooperation Between the United States and the People's Republic of China was the result of four years of intensive negotiations between the two governments to reach an accord accommodating the United States' Atomic Energy Act of 1954 and its Nuclear Non-Proliferation Act and China's still tacit disagreement with the Nuclear Non-Proliferation Treaty and noncompliance with the International Atomic Energy Agency's safeguards on the transfer of nuclear technology. China's previous stance on nuclear proliferation was not well received by Congress either. Faced with Congressional requirements for a redefined position on nuclear non-proliferation before receiving American transfers of nuclear technology, China "unequivocally" endorsed nuclear non-proliferation and on 1 January 1984 joined the International Atomic Energy Agency thereby requiring safeguards on its nuclear exports to non-nuclear-weapon states. [Ref. 26:p. 877-9]

The final step in China's long journey towards an endorsement of non-proliferation practices was completed in January 1992 when China formally acceded to the Nuclear Non-Proliferation Treaty. The rehabilitation of China on the international scene after the devastating events of Tianamen Square in 1989 may have contributed to China's concession. Just as likely, China is desirous of placating Western concerns about its arms sales, specifically its missile

technology transfers and sees the treaty as a conduit for showcasing China's dedication to preventing the proliferation of nuclear weapons and technology. China's missile transfer policies will be discussed in the next section.

C. DISARMAMENT ISSUES

1. Arms Control

Because of its early view that a nuclear arms race existed only between the United States and the former Soviet Union, initial Chinese positions on the issue of arms control have been ones of non-interest. China believed that its nuclear weapons were a stabilizing factor against the proposed nuclear monopoly engendered by the two superpowers and therefore took no interest in the initial United Nations disarmament talks in 1977. As previously described, it felt that general global disarmament talks were ineffective without a preliminary avowal by the superpowers to substantially reduce their nuclear arsenals.

In the 1980's, with the Strategic Arms Reduction Talks between the former Soviet Union and the United States beginning, China revised its initial stance to accommodate the new arms control developments. At the June 1982 United Nations special session on Disarmament, China's Foreign Secretary Huang Hua revealed China's new position linking superpower disarmament with several confidence building

measures for global security. He iterated that the two superpowers should take the lead in weapons reductions, that conventional and nuclear disarmament should coincide, that verification rules should be strictly enforceable and that all nations should have an equal voice in disarmament negotiations. [Ref. 27:p. 32] Sounding a familiar Chinese motif, Huang Hua reiterated China's basic security premise that:

> Small and medium-sized countries are all entitled to take what measures they deem necessary to maintain their defense capabilities for resisting aggression and safeguarding their independence. The measures and steps decided at different stages of disarmament must not prejudice or endanger the independence, sovereignty and security of any state. [Ref. 28]

China further recommended a two stage process whereby the superpowers reduced their nuclear arsenals by fifty percent while other nations agreed to a "no-first-use" pledge. The second stage after initial superpower arms reductions would entail the ending of "testing, improving or manufacturing" nuclear weapons by all nations along with the rest of the world's nuclear powers joining in a general nuclear disarmament in agreed proportions. [Ref. 27]

The history-making bilateral Strategic Arms Reduction Treaty signed by President Bush and President Yeltsin in January 1992, resolved to bring the superpowers stockpiles down to three thousand five hundred warheads each, well beyond the fifty percent reduction goal set by the Chinese for reciprocal arms control initiatives. Calls

by President Yeltsin for similar reductions in France's, Britain's and China's long-range nuclear arsenals were met coolly. On 30 January 1992, China responded to President Yeltsin's invitation by saying that it would take part in the disarmament process initiated by the superpowers when they had reduced their nuclear arsenals to "a level matching China's". [Ref. 29]

Again, flexible Chinese policy allowed it to avert any serious initiatives curtailing or reducing its nuclear arsenal, a position not out-of-keeping with the other medium nuclear powers. Clearly, China will not easily give up its nuclear assets and will continue to maintain a viable nuclear deterrent for as long as it can. It will continue to encourage disarmament accords as long as it is not called upon to participate in them.

2. The Intermediate-Range Nuclear Forces Treaty

The Intermediate-Range Nuclear Forces talks in the early 1980's which resulted in a treaty in 1987, caused concern to the Chinese leadership. If the French and British nuclear weapons were not to be included with the Americans weapons in the talks, then Chinese weapons should not be considered along with the Soviets. If American nuclear interests were decoupled from Europe, then the Soviets would be free to redeploy their excess European

intermediate missiles closer to Asia thereby increasing the threat to Chinese security.

With the concurrent deployment of the Soviet Union's SS-20's intermediate-range weapons (five thousand km) targeted at China as well as Europe, China hoped for continued United States' nuclear engagement in Europe to check possible Soviet nuclear ambitions in Asia. However, the disagreements between the two states over deployment of cruise missiles, which weapons to include in the treaty and conflicting ideas on what "parity" entailed, did little to convince Beijing that the disarmament talks were capable of securing world stability and freedom from superpower nuclear hegemony.

The proposal by Soviet Foreign Minister Gromyko in 1983 that Soviet SS-20's be deployed in Siberia and thus unable to reach Europe, was of greatest concern to the Chinese. This simply underscored Chinese suspicions that superpower disarmament talks were nothing more than manipulations by the two countries to maneuver for superiority at the expense of third party interests. Therefore, the sole objective of Beijing was to attempt to influence the course of the disarmament talks so that the result would be as less damaging to China as possible.

China made clear the unacceptability of Soviet-American nuclear negotiations that might result in the transfer of Soviet theater nuclear forces capable of

targeting Asian countries, especially China.[Ref. 30:p. 237] China put forward three principles it desired of the superpower negotiations:

- that the European arms control process be related to, and closely interlinked with, Asian arms control, that is, world peace and security is indivisible;
- that there should be no transfer of excess intermediate missiles from the European part of the Soviet Union to its Asian territory;
- that the Soviet Union should drastically reduce (not totally eliminate as was China's position earlier) the number of SS-20 missiles already deployed in its Asian territory, that is, there should be global ceilings on the intermediate nuclear weapons. [Ref. 30:p. 241]

Chinese efforts to protect itself by influencing the intermediate nuclear talks resulted in a pledge by the Soviets to destroy, rather than transfer, their European intermediate missiles and the United States acquiesced to "substantially reducing" the superpowers' intermediate missile arsenals and not include French and British intermediate missiles in the negotiations. China continued to push the Soviet Union for the reduction of the number of its intermediate missiles already deployed on the Sino-Soviet border. Chinese desires in this respect were met by President Gorbachev in 1987 when he announced the acceptance of the elimination of short-range and long-range intermediate nuclear missiles in Asia and Europe and signed the Intermediate Range Nuclear Weapons Treaty with the United States on 8 December 1987. Chinese response to the Soviet and American arms reduction initiatives was positive

though tempered by reminders that the superpowers' nuclear arsenals were only reduced by five percent and that nuclear war was still a very real threat to world stability. [Ref. 30:p. 263]

Though only a minor nuclear power with respect to the superpower states, China's influence on the intermediate talks along with the concerned interest of the other medium powers, shows the potential difficulties inherent in world nuclear disarmament talks. As the strategic balance of the world changes, and as the nuclear arsenals of both Russia and the United States decline, the implied influence of a diversified and independent Chinese nuclear capability will make disarmament objectives of the superpowers harder to achieve and greatly change the dynamic of their initiatives. Although China recognizes that its nuclear capabilities are inferior to the superpowers, it jealously guards whatever advantage it may possess in shaping nuclear balance.

In the case of the intermediate talks, China was able to influence the negotiations so that its security status remained intact. More and more the superpowers will have to consider China's position in any future disarmament negotiations. This is further exemplified by China's views of the Strategic Defense Initiative.

3. Strategic Defense Initiative

The announcement of President Reagan's Strategic Defense Initiative in 1983 suddenly raised China's stake in the issue of disarmament. The vision of a comprehensive space-based American ballistic defense system capable of defeating Chinese as well as Soviet long-range intercontinental ballistic missiles, (and thereby effectively nullifying China's small deterrent force), was too critical a situation to ignore. Chinese concern over the strategic defense initiative was illustrated in 1985 by Deng Xiaoping's statement to former President Nixon that:

> We are very concerned about the escalation of the nature of the arms race and are opposed to any arms race in outer space. We are against whoever goes in for the development of outer space weapons. [Ref. 31]

Hou Zhitong, China's ambassador to the United Nations Committee on Disarmament, reiterated this concern in October 1989:

> China is always opposed to the arms race and stands for the complete prohibition and thorough destruction of nuclear, chemical, and biological as well as space weapons.
>
> The development of space weapons has exacerbated the escalation of the arms race, which leads to the militarization of outer space, thus posing a new threat to the existence of mankind and the international security. The countries with the largest space capabilities competing for space weapon development should bear a special responsibility to undertake not to test, develop, manufacture, and deploy space weapons and to destroy all the existing space weapons. [Ref. 32]

China signed the Outer Space Treaty in 1983 [Ref. 76:p. 602] perhaps out of concern for its inability to

compete with the United States in a "Star Wars" scenario. By doing so, it is plausible that it hopes to dispel any thoughts that it is intending to develop similar systems in space. It has also participated in the United Nations First Committee on Issues of Arms Race and Outer Space held in November 1990 where Ambassador Hou Zhitong once again called for:

> [The prohibition of] the use or threat of use of force and any other form of hostile activities against outer space from earth or against earth from outer space.
> Although new progress has been made in certain areas of disarmament in recent years...no due headway has been made in the important area of preventing an arms race in outer space.
> It is disappointing that the two superpowers, which possess the biggest space capabilities, have failed to make headway so far in prohibiting space weapons, and the research and development of space weapons have led to a qualitative escalation of the arms race.
> The complete prohibition and thorough destruction of space weapons represent the most fundamental and effective means of preventing an arms race in outer space. China shares with the world community a strong expectation for the countries with the greatest space capabilities to undertake fully their special responsibilities for the prevention of an arms race in outer space, to speed up in earnest their bilateral negotiations to this end, and to conclude an agreement at an early date on halting the development and deployment of space weapons and destroying all such weapons.
> China maintains that the conference on disarmament and its ad hoc committee on the prevention of an arms race in outer space should, without any delay, hold substantive negotiations on an agreement to prevent the arms race in outer space in all its aspects, to prohibit and destroy all space weapons, and to ensure the deweaponization of outer space. [Ref. 33]

China continues its pattern of calling for the curtailment of potential developments beyond to its own nuclear capabilities. Considering China's past proclivity

for rapidly developing capabilities that many thought were beyond the scope of its technological endeavors, however, the superpowers would do well to heed China's call for arms controls in outer space. Including China in any "star wars" scenario is the beginning of wisdom.

4. Other Nonproliferation and Disarmament Initiatives

In 1985, China endorsed the concept of a nuclear-free zone in the South Pacific and formally recognized the Treaty of Rarotonga in 1989. It has previously endorsed a similar nuclear-free zone in Latin America established by the Treaty of Tlatelolco in 1974. [Ref. 76:p. 602]

Long an advocate of the abolishment of biological and chemical weapons stockpiles, China endorsed the Chemical Disarmament Convention on 13 January 1993. China has long advocated the destruction of these stockpiles by all nations, calling upon the superpowers to lead the way with the initial destruction of their own stockpiles. The 1993 Convention presented China with another opportunity to demonstrate to the world its evolving position supporting the control of weapons of mass destruction. [Ref. 34:p. 103] China also subscribed to the Antarctic Treaty (1983) and the Seabed Treaty (1991).

D. NUCLEAR TECHNOLOGY TRANSFER ISSUES

Despite China's assurances of its compliance with current nuclear nonproliferation regime practices, its

nuclear related technology transfer practices,(whether nuclear energy transfers, dual technology transfers or actual weapons sales), have remained a source of concern for the United States. Part of the dilemma for China has been balancing the economic necessity of its arms and technology transfers with its need to assure potential advanced technology contributors that it is responsible regarding the proliferation of lethal weapons. Its stated policy concerning the noninterference into a nation's sovereign affairs and its position regarding attempts by the Western powers, the United States in particular, in maintaining a military superiority over the third world also puts it at odds with the current nonproliferation.

China's disregard for the potential dangers of its transfers of missiles, nuclear technology and dual-technologies has prompted the United States to put immense pressure on China to reconsider its transfer and sales practices. Of particular concern have been China's recent arms export practices. Although China has agreed to adhere to the guidelines of the Missile Technology Control Regime, the United States and its allies are skeptical about Chinese intentions to follow strictly the rules of the game.

Third World nations are the main consumers of China's missile technology and nuclear power exports. Many of these nations are not signatories of the Nuclear Nonproliferation Treaty and are not bound by the International Atomic Energy

Agency's safeguards for nuclear technology transfers. Therefore, they take advantage of China's liberal transfer policies. They are able to acquire complete missile systems and subsystems as well as accompanying production assistance unobtainable in the tightly regulated markets of Western nations. Of longer term concern, is China's propensity for assisting client states with assistance in the development of indigenous missile production capabilities. This particular practice has resulted in the proliferation of Chinese-designed missile systems by countries even less constrained by Missile Technology Control Regimes practices than China.

1. Chinese Missile and Technology Transfers

The recipients of both China's weapon exports and Chinese assisted missile producing states' exports are the very unstable regions of the world that current proliferation controls are trying to constrain. This means the Middle East, with lesser concern over sales to Latin America, South Asia and North Korea. [Ref. 35] Examples of China's recent and more troubling transfers follow.

Korea: Chinese missile technology sales to North Korea as well as substantial Chinese technology assistance in reorganizing and maintaining Soviet-established assembly facilities have made North Korea the foremost supplier of

Silkworm and Scud-B missiles to the Middle East. It is also believed that China originally intended to assist North Korea in its ballistic missile program. A six hundred kilometer range tactical ballistic missile with a one thousand kilogram warhead code named Deng Feng 61 was allegedly being developed for sale to North Korea. Since, for internal "political reasons", the sale was cancelled by the Chinese, it is unclear whether North Korea ever received any of the technology associated with the Deng Feng 61. [Ref. 35:p. 559]

Pakistan: Chinese negotiations with Pakistan over the sale of its M-class tactical ballistic missiles were said to have occurred in 1986 or 1987. China is also believed to have assisted Pakistan's with the development of its Haft-2 surface-to-surface missile during the same time period. [Ref. 36] The actual transfer of M-9 missiles to Pakistan have not been confirmed although deliveries of transporter-erector-launchers for the M-class missiles had been reported. [Ref. 37] Subsequent United States sanctions against the transfer of satellite and computer technology to China because of it missile transfer practices, (especially the possible transfer of M-class missile technology to Pakistan, Syria and Libya) were levied. These sanctions were lifted in February of 1992 in exchange for China's acceding to the Missile Technology Control Regime. It is by no means certain that the Chinese

actually stopped the sales and it may well be that actual transfers of M-9 and M-11 missiles are in the works. [Ref. 38]

Saudi Arabia: In late 1987, China sold approximately thirty intermediate-range ballistic CSS-2(DF-3) missiles with a range of two thousand kilometers and equipped with conventional warheads. The contracts included the building of a launch site and maintenance on the missiles. This is the only known sale of missiles between the two countries although it is purported that Saudi Arabia had considered buying the M-9 short-range ballistic missiles. Subsequent military considerations associated with the Gulf War preempted the acquisition of the M-9 in favor of upgraded F-15E/F's from the United States. [Ref. 35:p. 563]

Iran: The Iran-Iraq War was as much a boon to Chinese weapons exports as it was for the United States. During the 1980's Iran and Iraq accounted for fifty-seven percent of all of China's weapons sales. Iran received twenty-two percent of its armaments from China from 1982-1989 which equated to over three billion dollars worth of arms sales to China. [Ref. 39:p.87]

China provided Iran with technical assistance on its Oghab tactical artillery rocket and sold it one hundred HY-2 Silkworm anti-ship cruise missiles. Iran also negotiated for two hundred Chinese C-801 cruise missiles. Reports of a

ten year military technology transfer agreement between the two countries including the production of M-9 and M-11 missiles have been substantiated by reported sightings of the production facilities near Ishfahan, Iran in 1991. [Ref. 40] Chinese assistance in missile production has helped Iran develop its Iran-130, a short-range ballistic missile with a range of one hundred thirty kilometers. China has also provided Iran with expertise and technology for the construction of an Iranian nuclear reactor. China is also supposedly launching a space satellite for Iran to aid it in the fields of radio and television transmission, reconnaissance and observation. [Ref. 41]

Iraq: Sales of hundreds of Chinese C-601 anti-ship missiles in 1988 were made simultaneously with Chinese assistance in its "Scud" upgrade program during the Iran-Iraq War. Though Iraq only accounted for nine percent of China's arms sales from 1982-1989, the value of the negotiations amounted to over four billion dollars.

Syria: The ever popular M family of short-range ballistic missiles also managed to find a buyer in the Syrians. Syrian interest resulted in a negotiated contract in 1988 before the M-9 missile had been flight tested, fueling speculation that the M-class missiles were developed by China with the express purpose of manufacturing the weapon for export. Syria is also purported to have provided

financing for the development of the missiles. Delivery of twenty-four M-9's with their associated launchers took place in 1991. China, prevented from delivering the rest of the negotiated missiles because of its accedence to the Missile Technology Control Regime's regulations, has substituted assistance to Syria's Scud production capability instead. [Ref. 35:p. 562]

2. China's Weapons Manufacturing Bureaucracy

China arms export industry is as convoluted and opaque as its nuclear policies and strategies. A clear understanding of who sells what is almost impossible to discern. Adding to the difficulty is the unique situation that the Chinese leadership has established by sanctioning military efforts in raise its modernization funds in any way that it can. The subsequent economic imperative has spawned a huge weapons industry with apparent little central control or even planning. What follows is a short description of China's weapons sales' establishment. While not comprehensive in scope, it illustrates the efforts the Chinese have made towards developing their arms industry and provides some insight into the complexity of Chinese arms export policy.

China's military establishment, headed by the Central Military Commission, consists of at least six autonomous groups each with their own budget, annual plan,

leadership and power base. The six groups are the General Staff Department; the Political Department; the Commission of Science, Technology and Industry for National Defense (COSTIND); the General Logistics Department; the National Defense University; and the Academy of Military Science. [Ref. 42:p. 88] The party-state apparatus has very little control over the various military departments, thereby making the military hierarchy fairly autonomous. The power of Deng Xiaoping remains the major cohesive and political link between the military leadership and the state-council. However he takes little interest in the day-to-day policy decisions of running the military, leaving that to the respective group heads of each department within the military. These distinct groups have formed separate networks based on relationships established during China's revolutionary war and have developed into major power centers that operate independently of each other. The absence of a cohesive whole is what makes Chinese arms control and arms transfer policy practically impervious to foreign influences. The fragmented military system controls the two major weapon-export corporations: Poly Technologies (Baoli Group) and New Era Corporation (Xinshidai Group). These two corporations control most of China's arms trade. [Ref. 42:p 92]

New Era Group comes under the control of the General Staff and the Commission of Science, Technology and Industry

for National Defense. It export military equipment and weapons manufactured by all of the defense-related military-industrial corporations and ministries. These ministries and their special interests include:

- China's Electronics Import and Export Corporation (CEIEC), (radars, communications, navigation, command, control,communication and intelligence systems, simulators, laser rangefinders and other electronics systems) Beijing;

- China National Aero-Technology Import and Export Corporation (CATIC), (aviation systems ranging from advanced fighters, attack aircraft, bombers, primary and advanced trainers, transport planes, helicopters aero-engines, missiles and aircraft components)Beijing and other locations;

- China North Industries Corporation (NORINCO), (development and manufacturing of armored fighting vehicles, howitzers, mortars, rocket launchers, anti-aircraft weapons, anti-tank missile systems, small arms, ammunition, fire control systems, sighting and aiming systems, high-performance engines, and Nuclear, Biological, Chemical protection systems) Beijing,

- China National Instruments Import and Export Corporation (CNEIC), (sole agent for the export and import of all research and development and production organizations connected to the Ministry of Nuclear Industry, including monitoring and control systems, air filters, rotating high speed cameras, non-ferrous metals and chemicals) Beijing;

- China Precision Machinery Import and Export Corporation (CPMEIC), (manufactures and markets a wide range of surface-to-surface, air-launched anti-ship, shipborne surface-to-surface, coastal defence and tactical missiles, space systems, rockets, satellites, robotics vehicles and precision optical and electronic products) Beijing; and

- China State Shipbuilding Corporation (CSSC), (manufactures warships such as submarines, guided missile destroyers, frigates and boats, anti-submarine vessels, landing craft, pontoon bridges, rapid-firing guns, torpedoes, mines, anti-ship missiles, electronic systems), Beijing. [Ref. 43:p. 6]

Poly Technologies Incorporated is run by a group of military officers out of the Chinese International Trust and Investment Corporation (CITIC) giving it a civilian facade. It sells all types of conventional weapons and military equipment including mortars, mortar ammunition, anti-tank mines, fast-attack missile craft, handguns, advanced military aircraft, various tactical missiles, and surface-to-surface short-to-medium range ballistic missiles. [Ref. 42:p. 93] This arms industry also comes under the jurisdiction of the General Staff, clearance of sensitive materials comes from the Central Military Commission. However, control is held by a group of senior officers from top Chinese leaders' families thus maintaining a vital and sensitive link between the military leadership and the political leadership. Poly Technologies has the power to sell weapons that have not yet been fielded in the armed services thus giving it more power over weapons sales and policy than New Era.

The nepotistic characteristic of arms sales bureaucracy in China has made it a highly aggressive and secretive organization that is out of the purview of the Ministry of Foreign Affairs. This creates a problem for foreign countries trying to influence China's arms sales policies since they might be negotiating with a ministerial department that has no control over arms transactions or arms policies. Criticism by the Ministry of Foreign Affairs

over Poly Technologies arms' practices is accepted with little patience as comments by one of its senior officers demonstrates:

> We are determined to devote ourselves to raising funds for promoting the four modernizations of China. This is a glorious mission that should claim precedence over all others. Right now the ministry of Foreign Affairs should review how to serve this mission...It is wrong to sacrifice the number one mission for the sake of foreign affairs. [Ref. 42:p. 95]

The power derived from the personal relationships of the senior officers to the political leadership, as well as the independence of the Central Military Commission in the formulation of military policy and especially arms policies, gives the General Staff and the Commission of Science, Technology, and Industry for National Defense considerable control over the sale of weapons. Heated debates often occur between the Ministry of Foreign Affairs officials and officers in charge of weapons-sales. The ministry makes no money from the sales but it must deal with the displeasure of the United States, for example, over the sales of such weapons as tactical ballistic missiles to Iran. More often than not, Ministry opposition to disputed sales is overridden by the tremendous profits to be made from the sale of weapons. [Ref. 42:p. 96]

This insight into the complexity of China's arms transfers explains some of the confusion seen in statements originating either by the foreign ministry or some of the arms sales agencies.

E. CONCLUSION

China's intentional aloofness from entangling alliances was a result of the traumatic Sino-Soviet split in 1960 and the subsequent failed security dividends from its association with industrial democracies in the 1970's. China believed that the root of all international tension lay with the superpower confrontation that existed between the United States and the former Soviet Union and their attempts to divide the world's nations into conflicting alliances.

This attitude was reflected in its independent nuclear policies as well as its independent foreign policies. Despite its independent and persistent stance concerning its nuclear development, China has not evolved into a major nuclear threat to the world. Due in part, however, to its refusal to be dissuaded from its goal of security against any nuclear threat, it has become a nuclear power in its own right.

Attempts by the United States to impose arms control regulations, whether addressing arms proliferation or limitations on countries' nuclear arsenals, have met consistently with Chinese protestations and accusations of interference with their sovereign right to self-defense. Of late the Chinese have modified only slightly their adamant insistence on total independence.

China has changed slightly its stance on nuclear non-proliferation. It has tempered its nuclear power technology transfers, acceding to the International Atomic Energy Agency's nuclear safeguards. It has joined the Nuclear Nonproliferation Treaty and has agreed to abide by the guidelines for missile transfers as set forth by the Missile Technology Control Regime.

Despite these changes, China still presents cause for concern to the western nations. Of special significance has been the niche China has carved out for itself through its arms sales. China's sales of missile systems, missile technology and assistance for weapons production to the Middle East have raised concerns on the part of Western nations. However, attempts to curb Chinese sales consistently meets with frustration because of the dichotomy between arms transfer policy and foreign policy. The military is in control of the arms transfer policies and has little regard for the Foreign Ministry's concerns over the diplomatic controversies generated by the sale of China's weapons, especially its missile systems. Little change in China's arms transfer policies is likely to occur as long as the military reaps substantial monetary rewards from arms sales which directly fund its modernization.

Additionally, China will continue to resist any attempts to reduce its nuclear arsenal and cannot be expected to

willingly engage in any disarmament negotiations that will limit its comparative nuclear power in the near future.

IV. STRATEGY AND CAPABILITIES

A. DEFENSE STRATEGY

The development of modern Chinese defense strategies can be divided into two distinct phases representing the heavy influences of the two men most responsible for dictating the course of modern day China: Mao Tse-Tung and Deng Xiaoping.

Mao Tse-Tung's concept of "People's War" heavily influenced China's initial modern defense strategy and built the People's Liberation Army into one of the largest in the world.

Deng Xiaoping extended Mao's ideas and developed "People's War under modern conditions" [Ref. 44] with the end goal of preparing China for the twenty-first century. One of the ways of modernizing "People's War" involved integrating technological innovation with the concept of massive defense.

Although China's defense strategy has changed, China's nuclear strategy seems to have remained intact: that of a minimum deterrent capability evolving to meet changing technological threats but not large enough to overwhelm any potential aggressor.

The end of the Cold War appears to have had little impact on current Chinese nuclear strategy because China had

already set its course beyond the present day international environment. China looked forward to the next century in its initial nuclear development, preparing itself for a future role of a strong modern China capable of competing with, as well as defending itself against the major powers.

Nuclear weapons play an important role in the modern-day defense of China. To understand China's current position on nuclear warfare one must understand "People's War" and its subsequent modernization, and must consider China's distinctive perceptions of the nuclear threat and nuclear war.

1. Mao's People's War

Mao defined "People's War" as a strategy of "victory denial" by means of a "protracted war". "Protracted War" began with the strategic retreat of the Chinese armed forces with the objective of luring the enemy deep into the Chinese mainland. Mao saw this as:

> the period of the enemy's strategic offensive and our strategic defensive, [for] a weak army fighting a strong army must preserve itself to prepare for a decisive counter-attack. [Ref. 45]

In guerrilla tactics, the irregulars or unconventional forces are an integral part of the People's Army. Rich in manpower and territory but lacking in advanced weaponry and technical knowledge, Mao fought with whatever resources he had at hand. Unable to face an enemy on its technologically superior ground, Mao sought to engage

the enemy in a drawn out pursuit of the Chinese army while subjecting the enemy to constant harassment. This was illustrated in his sixteen character formula for guerilla warfare tactics:

> The enemy advances, we retreat; the enemy camps, we harass; the enemy tires, we attack; the enemy retreats, we pursue. [Ref. 46]

Direct confrontation was not a tactical goal in this first phase of a People's War. Mao envisioned the success of this stage as a stalemate whereby the Chinese guerrilla army destroyed the enemy's morale and will to fight. The militia would seek do this by capturing the enemy's arsenal. Mao's objective was to mobilize the countryside against the city, where his enemy was entrenched. He would wear down the enemy by constant harassment. The final victory in the People's war was to be achieved by a "strategic counteroffensive", carried out by guerrilla units, made up of regular forces and accompanying militia.

Mao's strategy relied upon preventing armed aggression against China because of a twofold deterrence:

- the deterrence of a protracted war (as opposed to the West's strategies of rapid war termination) and if war ensued,
- after waging a protracted war, threaten the enemy with annihilation by counterattack. [Ref. 47]

The underlying philosophy of Mao's "People's War" was pragmatic. China's magnitude and massive population coalesced by a single guiding ideology would constitute the

heart of the defensive strategy of China. Mao viewed manpower as being the deciding factor in winning a war, even in the face of superior weaponry. A war, supported and carried out by the people, would have the moral mandate and, eventually, the superior will to overcome any aggressor.

This view of "man over weapons" underlay the "paper tiger" argument that, despite the Western powers' decisive superiority in weapons, especially nuclear weapons, they would not win a war in China because they would never have a moral mandate and they never could occupy China. In short, China would always win a "People's War".

Mao's concept of the superiority of manpower over weapons relegated the use of nuclear weapons to a supporting role. This was diametrically opposed to the West's concept which:

> ...viewed nuclear forces as a cornerstone of their deterrent capability...Nuclear forces are seen by the Chinese as a supplemental deterrent weapon that prevents superpower nuclear blackmail. [Ref. 48]

China's concern with "nuclear blackmail" also gave rise to its belief that limited warfare was a greater threat than global nuclear war. Since nuclear war would not be limited, the major characteristic of war would be conventional. Therefore "People's War" rules would apply thus reducing the effectiveness of nuclear weapons. While China recognized the utility of nuclear weapons, it rejected the idea that the use of nuclear weapons alone would win a

war. Nevertheless, China vigorously pursued a nuclear capability while rejecting the West's notion of "massive retaliation".

The Chinese continued to view as the core of its defense strategy the following:

- vast territory (ample maneuvering room);
- a large population;
- a large reserve of manpower which can be mobilized at its militia training centers in its more than two thousand counties to fight a "People's War";
- and invaluable experience in using inferior weapons to counter enemies equipped with superior firepower

This underpinned its claim that nuclear weapons were entirely defensive and that China would never be the first to use them. China disavowed any intention of becoming a nuclear superpower and continually asserted that the main impetus behind its nuclear weapons development was as a response to a definite nuclear threat from the United States. [Ref. 12:p. 19]

China's nuclear program was not without its political and economic costs. It involved constant arguments, sacrifice and revisions of the philosophy of People's War.

Mao believed that the military was to remain a tool of China's political leaders; who were to be the ultimate planners of military strategy and rulers of the Chinese state. This resulted in little military input when deciding

what types of nuclear weapons to develop. Thus the Chinese were naive in their development of nuclear weapons, for example, planning to build long range missiles capable of targeting their archenemy, the United States, before they had even manufactured a single rocket or atomic bomb. To their credit, they did achieve their ambitions but not after considerable reorganization and reevaluation of what it was that China really needed in terms of nuclear capability and what it was capable of developing.

As the danger of preemptive strike from the United States against China's nascent nuclear facilities [Ref. 49] receded, China during the 1960's and 1970's opted to sacrifice a near-term comprehensive nuclear weapons acquisition strategy in favor of a long-term plan tied to the development of the economy and the broadening of the technology and industrial base. [Ref. 50] This course of events underscored the Chinese leadership's decision to establish conventional deterrence as their basic defence policy, supplemented by a nuclear force. [Ref. 47:p. 69]

But then the death of Mao Tse-Tung in 1976 heralded the entrance of an era of modernization in China's military forces and economic policies, and introduced the Deng Xiaoping stage in the evolution of China's defense strategy.

2. People's War Under Modern Conditions

Mao's death precipitated a long overdue debate on what China's defence policy and military strategy should entail in the face of changing world situation. The realization that the concept of long protracted war was anachronistic and that future war would be limited but intense as exemplified by the 1972 conflict between Egypt and Israel and the Vietnam War. These conflicts brought home to the Chinese leadership the advances that the rest of the world's armed forces had made and the changes in warfare tactics these advances engendered. The weapons in the Soviet Union's and American arsenals represented by their advance air power capabilities and precision guided munitions rendered the Chinese defensive capability virtually obsolete and People's War ineffective.

"Positional warfare", "offensive campaign" and "quick decisive battles" became terms often proffered as a replacement for the now defunct People's War. [Ref. 51] Su Yu, political commissar of the Academy of Military Sciences, clearly called for a change when he said that:

> Some of [Mao's] principles no longer fit the actual conditions of future wars, and we should have the courage to break through them. [Ref. 52]

This touched of the internal debate that has been ongoing since the 1980's and centered around several key issues:

- the changing threat environment;
- the nature of future war;
- the deployment and use of nuclear weapons;
- nuclear arms control and superpower strategic balance. [Ref. 75:p. 10]

By 1985, the threat environment facing China had altered considerably from the earlier Soviet-threat-oriented war scenarios on which China had based its defense policies. The United States, under the stewardship of Ronald Reagan had regained parity with the Soviet Union, and was seen to once again forcefully oppose Soviet adventurism in foreign policy affairs resulting in a superpower stalemate. Then the Sino-Soviet rapprochement following the Gorbachev peace initiatives in Asia starting with Soviet withdrawal from Afghanistan and the unilateral reduction of Soviet forces on the Sino-Soviet border and leading to the Sino-Soviet summit in 1989 occurred.

Meanwhile, the fierce military competition between the United States and the Soviet Union had taken its toll on both their economies, and as both countries appeared to enter a general economic decline as compared to the growing economies of Asia and other third world countries, the bipolar world gave way to a multipolar environment. This forced a revision of Chinese thinking now that the comfortable balance of the Cold War had ended. Instead of a global war, China was now faced with the possibilities of

numerous small and regional wars, many of which could break out on her borders. Zhang Jingyi, a Chinese analyst at the Chinese Academy of Social Sciences, voiced this concern:

> with the relative decline of the superpowers, regional powers will feel even more free to use force...bipolarity will lead to a situation of several hegemonist contending with one another...the next 20 years...will be a period of limited conventional wars and armed conflicts of varying scale, duration and intensity but which still take place under the implicit threat of nuclear force. [Ref. 53]

Even though the superpowers threat may have lessened, the emergence of more capable Asian military powers such as India, Japan, Vietnam and Taiwan refocused Chinese security concerns on these emerging military powers.[7]

The emergence of China's growing economic interests and maritime trade obliged the Chinese to reassess the significance of open sea trade routes and the threat from the emerging Asian military powers posed to this critical conduit for China's economic growth. China needed to start thinking about stretching its geostrategic boundaries beyond its land borders if it was going to be able to protect its growing economic interests.

These realities resulted in the Central Military Commission's direction in June 1985 that China's war

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[7] Military expenditures in Southeast Asia for the decade from 1978 to 1988 grew at a rate of 6.5%, higher than North America at 5.9%. From World Military Expenditures and Arms Transfers, 1989, U.S. Arms Control and Disarmament Agency, October 1990, p.3.

preparations would no longer be for an "early, major, and nuclear war" with the Soviet Union but for local limited war around China's borders. [Ref. 54:p. 193] Preparing for low intensity conflict and regional war became the main strategy the Chinese military trained for.

Five types of limited war were identified as critical conflicts that China must prepare for:

- small-scale conflicts restricted to contested border territory;
- conflict over territorial seas and islands;
- surprise air attacks;
- defense against deliberately limited attacks into Chinese territory; and
- "punitive counterattacks" launched by China into enemy territory to "oppose invasion, protect sovereignty, or to uphold justice and dispel threats." [Ref. 55]

The types of conflicts the Chinese anticipated would require rapid insertion of troops, taking the initiative, taking quick decisive action and even launching a preemptive strike against an enemy. Allowing an aggressor deep into Chinese territory before striking back was no longer feasible, China would take the fight to the enemy rather than allow its borders to be violated and risk major disruption of its rapidly growing industrial and population centers.

This resulted in the formation of rapid deployment forces, "First Platoons", marine corps, amphibious forces

and special airborne forces. [Ref. 75:p. 15] It also required that commanders be allowed to act freely and quickly in the face of the threat and be allowed to tailor his forces to the threat environment. China's vast region encompassed a wide variety of warfare environments: desert, coastal, mountain terrain. Different areas would require a different mix of forces to defend the different regions of China. This brought about the consensus that China's seven military regions would conduct independent training and field exercises tailored to their operational requirements. Within the military region, the emphasis would still be on combined arms, quick response and mobile warfare. The concept of a massive army rising out of the peasant's field had been discredited and completely eliminated. The emphasis was on independent defense by each regional commander of his specific military region.

A feature of this quick, decisive, highly mobile war was the emergence of troops trained to do this kind of combat. The designation of these special warfare troops as "fists" (quantou) illustrates the specialized function of these soldiers. They are trained as:

> "door openers", striking at critical targets and widening a breach in the enemy's position; as "scalpels" to strike at targets that, when destroyed, will paralyze the adversary's combat potential; as "steel hammers" to seize crucial enemy positions; and as "boosters" to speed up the tempo of a campaign by opening up new battle areas within the invaded area. [Ref. 56]

These "quantou" are airmobile units and are capable of being deployed anywhere in China within twelve hours. Each military region has developed its own "quantou" units specific to their operational requirements. [Ref. 57] For example, China's growing concern with its coastal defense and power projection in the South China Sea has resulted in the development of a marine corps as the "guantou" units for the South Sea Fleet.

These developments represented the transformation of the People's Liberation Army into a force prepared for the key characteristics that Chinese strategists had identified in modern warfare:

- *Three dimensional warfare*, warfare that is simultaneously carried out in the air, on land, and at sea, and it is difficult to differentiate between the front line and the rear areas;
- *Combined Warfare*, combined operations of infantry, armored units, artillery, marines, and airborne units under an integrated command; and
- *General Warfare*, war is not only a trial of military strength but also a general trial of strength of various war factors, such as economy, science and technology, politics, and diplomacy. [Ref. 58]

Changes in modern warfare and implications for China's warfare tactics continue to capture the military's attention as exemplified by Zhu Chao, Commander of the Henan Provincial Military District, who recognized the changes in modern warfare and pointed them out:

> The local wars which broke out since [the] 1970's have already shown some of their high technology characteristics, 1. Troops are highly capable. They are

> capable of not only fighting three-dimensional warfare, but also fighting independently. With their available equipment, they are capable of both attacking and defending while giving first place to attacking the enemy. 2. They have considerably high capability to launch strategic air raids and use parachute troopers on different scales. [refers to Gulf War] 3. Their fire response is quick and immediate, and their strength in launching offensives strong. With the coordination of ground, naval, and air forces and the use of all types of guided missiles against short, medium and long-range targets they inflicted heavy casualties on the enemy in all areas. 4. They also adopted measures against the enemy's guerilla activities. [Ref. 46]

Zhao goes on to reemphasize the main points presented by the military strategist and the incorporation of them into China's modern guerilla warfare tactics and elaborates on the importance of independently operated units and the primacy of flexibility and initiative in conducting modern guerilla warfare:

> In waging guerilla warfare against high technology, we must regard the practice of keeping initiative and flexibility as our soul....Being flexible means that we must not only resolutely, swiftly, secretly and timely disperse, concentrate or shift our guerilla forces, but also select the right targets, forms and times in striking the enemy...[this means] they must be equipped with modern means of communication, set up reliable intelligence and information networks, timely understand the changes in the enemy's situation...we must "block"...use electro-magnetic waves to destroy the enemy's air command, use artificial smoke screens to blur the enemy's vision and use our own air force to intercept the enemy helicopters so that they cannot enter our airspace or accurately hit important targets...we must "fight"...use our air units to intercept enemy helicopters group by group and use our infantry fire to lure the enemy into our ambush areas, and concentrate our fire power on them...we must emphasize defense" ...familiarize ourselves with the terrain [and use it against the enemy]. [Ref. 46:p. 38]

China's reappraisal of its military strategy did not automatically discount the eventuality of a major nuclear war and awareness of the use of missiles by foreign armed forces was noted with interest as represented above. Many argued, that it was in being prepared for a major nuclear war that prevented one from actually occurring and probably had prevented the smaller conflicts China had been engaged in the past from evolving into limited nuclear war. The argument calls for continued preparation for major nuclear war as this would be the only way to ensure China's security in a complicated and evolving high tech threat environment. The argument reasserts that any medium nuclear power relies on the potency of nuclear weapons to keep it free from superpower manipulations and will prevent interference from superpowers in small regional wars. With the proliferation of nuclear weapons worldwide, China must integrate its nuclear weapons with its conventional strategy in preparation for limited nuclear war. This has evolved into the nuclear theater-based exercises that the People's Liberation Army has engaged in since the early 1980's.

China's post-Mao defense strategy has eschewed the naive tactic of an army carried forward with only the force of its masses. It has evolved into a modern army integrated with the high technology weaponry and force projection strategies commonly associated with western armies. In the wake of the overwhelming superiority of the technological

threats facing China, it has changed its defence strategy to better face the challenges of a high tech war. This transformation is not without its dilemmas however as the realities of modern warfare clash with the realities of the economic and social costs of a modern army.

3. Modern Warfare Realities

> Since 1977, technology has displaced politics and ideology as the force motivating Chinese military policies. [Ref. 47:p. 69]

The disastrous results of the "Great Leap Forward" and the "Cultural Revolution" on China's economy at the end of the Mao era forced the new government to adjust its economic policies resulting in the long term goal of modernizing China's entire industrial base and stressing profitability as an impetus for growth rather than central planning. The modernization of China was to take place in four key sectors known as the "four modernizations": agriculture, technology, science and defense. In pursuit of this goal, the first priority was developing science and technology as elements of the primary productive force as well as opening up China's economy to competitive practices. [Ref. 11:p. 31]

However the cost of the new weapons systems along with the technology required to produce them were well out of reach of the Chinese and resulted in a prioritizing of its modernization that put the military last. Before China

could begin to modernize its defence to world standards it first had to rebuild and modernize its industrial and technology base.

In the meantime, the Chinese leadership, headed by Deng Xiaoping, directed the military to concentrate on component, manpower as well as doctrinal modernization. The Army was withdrawn from the political arena and instructed to "concentrate on training and defence." [Ref. 59] Accordingly, much attention was spent conducting field exercises, concentrating on inter-service drills and combined arms warfare, and improving soldiers' skills in anti-tank warfare, air tactics and improving command, control, and communication skills. Additionally, technical schools were revamped to better prepare soldiers and commanders alike for the technological changes to come. [Ref. 60]

Despite the modernization efforts begun under Deng Xiaoping, China recognizes its still inferior nuclear and conventional capability. The care, feeding and training of three million men is a major economic drain representing twenty percent of the central government expenditures in 1988. [Ref. 61] Its military equipment includes over fifteen thousand four hundred battle tanks; two thousand eight hundred armored personnel carriers; over six thousand fixed-wing combat aircraft, including naval aircraft; ninety-three submarines including one nuclear-

powered ballistic-missile submarine and four nuclear-powered attack submarines and fifty-five destroyers and frigates. [Ref. 62] The associated cost for upgrading and modernizing this force is staggering especially when one considers that much of China's military equipment is based on Soviet design from the 1950's and 1960's, poor competition for the modern armed forces of present day militaries.

Additionally, China's modernization in its civilian sector has exposed it to the vulnerabilities of nuclear and conventional attack that it once sought to exploit against the nuclear superpowers, that of large population and industrial centers, especially in and around its special economic zones. Some estimates predict that China's urban population is expected to reach fifty one per cent of the total population by the year 2000. [Ref. 63] With a large portion of its armaments industry located in the North and its growing civilian industrial and manufacturing sectors located along the southern coastal regions, China has become increasingly more vulnerable to the disruptions of war. The lethal and destructive force of even a limited war would be unacceptable to China. The potential damage to its industrial base, nuclear energy plants and economic base would make a modern war much more costly than war in the 1960's and 1970's.

China's logistical tail has increased substantially with the modernization of the People's Liberation Army but the legacy of an army trained in guerilla tactics rather than modern warfare has made its transition more difficult and expensive. The vulnerabilities of this transitioning army are exemplified by its weak logistical support systems, poor mobility, daylight-only fighting capability and its inferiority in both tactical and strategic nuclear weaponry. [Ref. 50:p. 24] Vice-Chairman Yang Shangkun understood the vulnerabilities of the Chinese forces when he said:

> The main contradiction in our armed forces building at present is the contradiction between modern war and the low level of our Armed Forces' modernization. [Ref. 64]

With regard to China's preparation for modern warfare in the 1990's the nuclear disarmament of the superpowers was overshadowed by the capabilities of the western military forces, the United States in particular, in the Gulf War.

> The Gulf War painfully underlined how backward and unprepared the [People's Liberation Army] is to fight a modern, high-technology war. One of the most telling lessons was that superiority in numbers matters very little against the quality of the weapons---which goes against a fundamental principle of Maoist military theory. [Ref. 65]

The stark realization of American (and bordering nations) military capability has refocused the Chinese military on its current vulnerabilities. This has resulted in a reevaluation of its capabilities and its strategies during

the interim period until it can achieve some sort of parity with its potential military adversaries.

B. CHINA'S EVOLVING NUCLEAR STRATEGY

1. Nuclear Development in the 1980's

The realization by Chinese military leadership of the mandatory incremental modernization of its forces in concert with the overall modernization of China's industrial and technological base has resulted in a slow but persistent increase in its capabilities. This is especially true in the nuclear field. A look at China's modernization efforts reveals a substantial increase in the capability of its nuclear forces indicating an increased emphasis on its nuclear deterrent capability in the interim until its conventional capabilities catch up to the potent threat from western and regional armed forces.

As China's military absorbed the realities of modern warfare, it also developed modernization strategies similar in many respects to western forces. Emphasis in developing a triad of nuclear forces (sea, land and air launched); acquiring capabilities allowing force projection; improving a limited but effective nuclear counterattack force; keeping pace with high technology weapons developments and enhancing strategic defense forces were (and are) all part of the leadership's priority of enhancing China's nuclear deterrent. [Ref. 75:p. 8]

China's development of a submarine-launched ballistic missile capability, together with cruise missile technology, multiple independently targetable reentry vehicles and tactical nuclear weapons seems to uphold this postulation. Chinese efforts to enhance the survivability of their missiles and increasing their second-strike capability also support this theory.

The development of submarine launched ballistic missiles underscores the Chinese view that the most capable deterrent is one that can survive a first strike, and ensure a second-strike capability. Considering the difficulties and costs of increasing the survivability of their vulnerable land-based nuclear deterrent force, a sea-based nuclear capability made the most sense. This was admitted by Liu Huaqing, the People's Liberation Army Navy Chief:

> In the face of a large-scale nuclear attack, less than ten percent of the coastal launching silos will survive, whereas submarines armed with ballistic missiles can use the surface of the sea to protect and cover themselves, preserve the nuclear offensive force, and play a deterrent and containment role. [Ref. 66]

Given the nuclear capabilities of Soviet and United States ships and the increasing naval capabilities of Japan and India, this appeared to be a prudent development.

The development of tactical nuclear weapons gave China a "limited" nuclear strike capability that could give it a credible nuclear deterrent and a retaliatory strike capability without escalating a war in the manner that a

ballistic missile launch would. This underlies China's assumption that future limited war would still have the threat of nuclear weapons associated with it.

The emphasis on modernizing its tactical nuclear capability has coincided with military exercises emphasizing nuclear and conventional combined arms warfare. Examples of exercises conducted include:

- In February 1980, the People's Liberation Army conducted and exercise utilizing tactical nuclear weapons with a miniaturized nuclear warhead of five kiloton yield;
- China's land and air forces conducted a tactical nuclear war exercise close to the Sino-Soviet border in June 1982;
- In mid-October 1987, the East China Sea Fleet of the Chinese Navy conducted exercises simulating combat under nuclear warfare conditions in the West Pacific and South China Sea;
- in June 1988, the navy conducted large-scale exercises in the East China Sea under simulated nuclear warhead conditions called "defensive wars under nuclear conditions";
- in July 1988, the People's Liberation Army's nuclear-capable aircraft off China's coast simulated dropping a five kiloton nuclear bomb and more than one hundred chemical munitions onto an enemy naval base;
- in September and October 1988, all of the army's anti-chemical warfare units were massed to test their combat performance in China's northeast and Tibet regions. [Ref. 75:p. 9]

Great interest has been shown in the continued success in the development and deployment of China's tactical nuclear weapons. Small, mobile and integrated with the People's Liberation Army in its strategic missile units, these weapons were originally intended to counter the Soviet

threat along the joint Sino-Soviet border. They were intended to block remote mountain passes and destroy bridges thereby preventing a Soviet invasion. [Ref. 9:p. 32] From the point of view of a fundamental Chinese strategy for the employment of its nuclear weapons, China cannot rely on its offensive strategic capability because of a basic numerical and technological inferiority compared to the superpowers. China can, however, raise the cost of attack to an aggressor with the promise of a nuclear retaliatory strike. Chinese reliance on this nuclear deterrent was made clear early in 1982:

> We have devised and produced the atom and hydrogen bombs, long-range guided missiles and other sophisticated weapons for self-defense...This is an important factor deterring the imperialists form launching a large-scale invasion against us. [Ref. 67]

A qualification of the "no-first-use" policy must be made here. Analysts of China's nuclear policy believe that the policy refers only to the use of weapons in an *offensive* manner against other countries. This does not preclude the use of Chinese nuclear weapons against an invading force within China's borders, whether or not that invading force has used nuclear weapons first. [Ref. 47:p. 73]
The consensus amongst China defense analysts appears to be that China's tactical nuclear missiles serve a dual function. First, they offer the option of countering in kind a potential Soviet attack supported with nuclear

weapons. Second, the use of tactical nuclear weapons would greatly enhance the defensive capabilities of the army against a mechanized invading force, an area in which the People's Liberation Army is still at a disadvantage. The assumptions have been, of course, that these weapons are to be deployed against a Soviet aggressor [Ref. 68] and that the strategic principles of "People's War under modern conditions" will be followed [Ref. 75:p. 10].

2. Nuclear Strategy

Despite its obvious efforts to field a credible nuclear strike capability, China insists that its nuclear strategy is defensive. Returning to the Maoist argument that nuclear weapons in the hands of "socialists" are defensive while nuclear weapons in the hands of "imperialists" are threatening, Zhang Jianzhi, China's Defense Minister in 1987, argued the differences between medium-nuclear states and the two nuclear superpowers. Zhang considered the superpower concept of nuclear deterrence equivalent to nuclear blackmail, while the same deterrent quality in the hands of China was a force to end or prevent the outbreak of nuclear war. [Ref. 75:p. 20] Zhang also identified four functions of the Chinese nuclear Strategy:

- supplementing manpower shortages;
- deterring an enemy's large-scale offensive, that is, nuclear weapons and missiles can be used in support of

an active defense strategy to threaten an enemy's massing of troops for a large-scale offensive;

- deterring an enemy by forcing him to consider the serious and unbearable consequences of a nuclear counterattack; and
- deterring intervention by superpowers in border conflicts. [Ref. 69]

Drawing from this, Zhang defined China's nuclear strategy as "limited self-defense" and described the main characteristics of the nuclear strategy:

- *its defensive nature*: China will maintain an actual combat capability primarily for defensive purposes;
- *its anti-deterrent nature*: its nuclear force can resist the superpowers' nuclear threat and nuclear blackmail in peacetime;
- *its self-defensive counterattack nature*: "we shall not attack unless we are attacked; if we are attacked, we shall certainly counterattack";
- *its limited nature*: China will develop a nuclear force of limited quantity but fine quality in the light of its own national conditions; and
- *its effective nature*: although China's nuclear strength is limited, it is reliable. Once it launches a nuclear counterattack, it undoubtedly will inflict unacceptable damage on the enemy. [Ref. 70]

These characterizations of China's nuclear strategy bring up the much debated arguments about whether China's nuclear strategy is one of minimum deterrence or whether it marks an aggressive intention. As mentioned earlier, the complexity and opacity of China's nuclear arsenal make it difficult to determine what its nuclear strategy actually is. Some western strategists have described China's nuclear capability as "minimum deterrence", others have relegated to

it the amorphous terms of "limited response" or "flexible deterrence". Yet again, due to its decades-long pursuit of a viable nuclear capability coupled with policy statements implying its integration of nuclear weapons into conventional war, China has also been accused of embracing a "war fighting" or "deterrence by denial" nuclear strategy.

Chong-Pin Lin, Associate Director of the China Policy Project at American Enterprise Institute, intimates that attempts to pigeonhole China's nuclear strategy into preconceived notions of other nuclear powers' strategies could lead to erroneous assumptions regarding its true capabilities, goals and intentions. His assessment of China's nuclear strategy surmises that neither term applies completely to China's inferred nuclear strategy and that its strategy probably consists of an integration of the two definitions of "minimum deterrence" and "war fighting".

Lin takes issue with the theory that China is practicing "minimum deterrence" and theorizes that it is better associated with a "war fighting" nuclear strategy along the lines of the former Soviet Union although not all the characteristics of a "war fighting" strategy completely apply to China either. [Ref. 71:p. 118]

"War fighting" nuclear strategy or "deterrence by denial" strategy implies the need for diversification over the entire spectrum of nuclear weapons to cover a broad range of contingencies. Lin sets forth three capabilities

conducive to a war fighting strategy which include nuclear weapons diversification, combined arms force structure and a decisive tactical nuclear posture. [Ref. 71:p. 119]

China, to some lesser extent has exhibited all three of these characteristics. Throughout the 1980's China had increased its capabilities beyond a simple nuclear triad to include six different types of strategic delivery vehicles. Though this lags behind the former Soviet Union's prolific twenty-six and the United States' eleven different delivery vehicles; China has shown a greater attempt at diversification than either France (four) or Britain (one) who are more representative of pursuing a "minimum deterrence" nuclear strategy. [Ref. 71:p. 120] China's efforts at diversification have necessitated a wide range of contingencies requiring strategic ballistic missiles.

China exhibited another characteristic of a war fighting strategy when it proclaimed a defence policy of combined arms, consisting of:

> an armed force integrating army, navy, artillery troops, tanks, military engineering troops, anti-chemical units, and strategic ballistic missile troops. [Ref. 72]

Its integration of tactical nuclear weapons with its combined forces exercise, as demonstrated by the earlier list of exercises, shows a growing tactical capability on the part of its troops to fight under limited nuclear scenarios. This encompasses the third characteristic of

employing nuclear tactics into its general war fighting stance. The Chinese eschewed the theory, held by the Soviets, that limited use of nuclear weapons was inherently escalatory, and have trained for the use of small, tactical weapons on the battlefield.

"War fighting" nuclear strategy implies that despite the possibility of nuclear weapons exchanges, the user intends to continue fighting and fully expects to absorb a nuclear weapon attack as well as use them. Thence a civil defence system as well as an anti-ballistic missile defence system would be requisite for this type of mentality. China does not have an adequate anti-ballistic missile defence system but has undertaken extensive civil defense efforts. They have recognized their vulnerability vis-à-vis an anti-ballistic missile defense and are attempting to develop the technologies, especially space technology, to address this problem. Inherent to civil defense preparations is the contention that a nuclear war is survivable. China believes that its advantages of a large population and geographic size would enable it to survive a nuclear war. This has been tempered somewhat by the economic advancements and all the accompanying urban growth that adds to the potential destruction of nuclear war, however China has long postulated the ability of its country to survive a protracted war, even a nuclear one. (Reality notwithstanding, the rhetoric continues.)

The efficacy of the "war fighting" strategy to China begins to weaken when judging it in light of the needs of a massive arsenal; counterforce targeting; command, communication, control and intelligence survival; strategic and air defenses and winning. [Ref. 71:p. 122]

Since a country intent on using nuclear weapons as deterrence by denial would seek complete destruction of its opponent, it follows that a massive arsenal of nuclear weapons would be requisite for ensuring the victorious outcome of a nuclear war. While China has fulfilled part of this requirement through its diversification of its strategic delivery vehicles, it has not, and shows no intent of, developing massive quantities of weapons. China can not build a nuclear arsenal that is not within its means economically. Lin also refers to China's historical strategic tradition of minimalism which advocates the minimum use of force and maximizing its effectiveness by emphasizing quality over quantity. [Ref. 71:p. 33] Though China did deviate somewhat from this historical strategic tradition during Mao's rule, there appears to be a return to this precedent with the modernization of the People's Liberation Army and the emphasis on quality over quantity under the current leadership. This applies emphatically to its nuclear arsenal.

China also does not engage in counterforce targeting, rather relying on countervalue targeting with its

large warhead yields. This is as much dictated by its current incapabilities for the accurate targeting of its strategic ballistic missiles and its corresponding vulnerabilities for the defense of its missiles as its disinclination to amass a large inventory of nuclear weapons. Since counterforce targeting is a characteristic of a war fighting nuclear strategy, China again does not fit this latter category.

China's inability to flexibly retarget its strategic missiles (mobility and guidance being a problem for its longer-range missiles) and the questionable survivability of its current command, communication, control and intelligence capabilities after a nuclear war (or conventional one) also put into doubt its ability to pursue a genuine war fighting nuclear strategy. In conjunction with its command and control vulnerabilities, China also lacks the necessary sophisticated and extensive operations and technology to mount a viable defense of its strategic and air weapons. It lacks the advanced missile radars and interceptors, the anti-satellite weapons, an air defense network and its accompanying missiles and the antisubmarine forces necessary for such a capability. Furthermore, it is years from acquiring the same. [Ref. 71:p. 122]

Finally, China's strategic tradition of emphasizing "undefeatability over the achievement of victory" (because a position of undefeatability depends upon one's own

preparation, whereas success in battle depends on the enemy making mistakes and therefore cannot be assured [Ref. 71:p. 20]) Its obvious lack of adequate technology prevents it from pursuing an objective of victory over the opponent in a possible nuclear war. The object of a war fighting strategy is victory using overwhelming force and superior defense and therefore does not fit China's historical strategic character.

China's nuclear strategy is undefinable in western terms since quantitatively China exhibits a "minimum deterrence" strategy but qualitatively and culturally it exhibits some of the characteristics of "deterrence by denial". One may conclude that its fundamental strategy lies somewhere between the two. This ambiguity serves China well and may reasonably be called deterrence by doubt, ambiguity and opacity. The enemy never can really figure out what China may or may not do!

C. CAPABILITIES

1. Modernization Efforts

In keeping with the four modernizations of Deng Xiaoping, the military began its efforts during the 1980's. However, the modernization efforts would have to be incremental and within China's means, a reality still observed presently as expounded by an article in *Jiefangjun Bao* in April 1992:

> The settlement of [the modernization of the military and the raising of its combat effectiveness] requires a comparatively long historical process and relies on the large-scale growth of the country's economy and on the large-scale improvement of our national defense science and technology...this can only proceed gradually, phase by phase, and step by step. [Ref. 73]

Initially, modernization entailed a number of actions that at first would seem to countermand the government's efforts to increase its military capability, measures in question include a decade of actual defense budget declines, achieved by cutting back force strength by one quarter from four million men to just over three million men; reemphasizing professionalism and soldiering and downplaying ideological training; and removing the policing function from the armed forces by establishing a separate People's Armed Police force not under the control of the army. Included in the modernization was the upgrading of equipment for conventional as well as nuclear forces.

Specific to the nuclear forces was the breakthrough in 1983 of a successful solid rocket motor which resulted in all subsequent missiles being solid propellant fueled. This increased their reliability and sharply reduced the launch times of the missiles. [Ref. 9:p. 26] The launch of the Julang-1, (a submarine launched ballistic missile), in 1982 carried forward the drive for projecting Chinese nuclear power. By 1984 the Chinese had made significant strides in its ballistic missile program by developing several types of intermediate range missiles known as the Deng Feng (DF)

family with ranges from one thousand two hundred to three thousand kilometers. These missiles extended China's small but growing triad of land-based, air launched and sea-based nuclear weapons.

In 1984, central authorities proclaimed that no major world war would occur in the coming ten to fifteen years. Subsequently the Ministry of Space Industry mandated four fundamental changes: change from liquid to solid propellants; change from *strategic* to *tactical* missiles; change from first to second generation strategic launchers; and change from experimental to utilitarian satellite missions. [Ref. 9:p. 28]

The result of this shift from the rapid development of long-range missiles to the development of a broader capability was a deliberate attempt to bring China up to speed with Western capabilities by the twenty-first century.

Emphasis was also directed towards mobility and guidance with continuing efforts to achieve guidance and precision targeting capabilities based on man-made satellites rather than the current use of stellar guidance.

Despite its emphasis on diversification, China continued to work on its long-range launch capabilities which resulted in the ongoing development of the Deng Feng 5, designated to have a range of twelve thousand to fifteen thousand kilometers and is supposed to be mobile. [Ref. 74]T he Deng Feng 5 points out Chinese intentions of developing a

strategic defense capable of targeting the continental United States. During the mid-1980's China was also believed to be developing multiple independently targetable reentry vehicles (MIRV's) for its intermediate range and intercontinental ballistic missiles which it had flight tested in 1985 and 1986 on its CSS-2 Intermediate Range Ballistic Missile's and CSS-4 Inter-continental Ballistic Missile's. [Ref. 75:p. 4] Despite these improvements to its land-based missiles, however, China has not quantitatively increased it land-based nuclear weapons with only an estimated three hundred warheads deployed. [Ref. 75:p. 5]

Continuing modernization during the 1990's has brought about an increase of twelve to fifteen percent in the military budget reflecting raising salaries of the professional army and increased expenditures for the purchase of modern equipment for the separate elements making up the People's Liberation Army. [Ref. 76] The result has been a steady though incremental growth in its conventional and nuclear capability projected to continue into the next decade. [Ref. 76:p. 84]

Along with its continuing improvements to its strategic ballistic missile capabilities, China has concentrated on its tactical nuclear offensive missile capability. [Ref. 50:p. 22] In addition to developing these new weapons it has concentrated on increasing the accuracy,

reliability and survivability of its existing arsenal. The upgrading of China's nuclear capability remains in keeping with its original strategy that plans to employ its nuclear weapons in combination with is conventional forces if attacked, but still represents a small deterrent capability vice a massive nuclear capability. (refer Appendix E) China has expended a great deal of effort to strengthen its nuclear deterrent and is relying on continued nuclear advancements to maintain its defense even though the superpowers are downsizing their nuclear arsenals.

2. Nuclear Arsenal

China's current inventory of strategic ballistic missiles as well as their conventional missiles and some of their specifications are presented in Appendix F.

3. Weaknesses and Vulnerabilities

Despite these developments however, China does have several weak links in its nuclear deterrent capability as well as its overall military capability. This is demonstrated by its lack of Command, Control, Communications and Intelligence (C^3I) capabilities; large gaps in its detection system for incoming missiles; its small and archaic submarine fleet and lack of aircraft carriers affecting its maritime power projection capabilities; its lack of stealth technology or anti-stealth countermeasures; lack of Airborne Warning and Control System aircraft; lack

of advanced precision-guided munitions; inadequate electronic warfare systems; and its small numbers of nuclear warheads compared to the United States and Russia. It is also trying to upgrade its strategic air defenses.

China has identified key technologies to help them address these vulnerabilities. Among the areas noted in the "Outline of Medium and Long-Term Science and Technology Development for the Year 2000-2020" are:

- Stealth technology: radar-indiscernible structure architecture, radar-indiscernible material, stealth wave-bands, laser, infrared, composite materials, electronic countermeasures;
- Telecommunications: communications satellite systems upgrades, introduction of advanced satellite earth station terminals, digital communications technology;
- Space and Aerospace systems: fighter aircraft, microelectronics, software engineering, high performance computing, power and energy systems; improved satellite launch vehicles, manned space vehicles, sensitive radars;
- Other high technology areas targeted: biotechnology, lasers, automation and robotics, advanced materials, artificial intelligence, aeronautics, energy technologies including: magnetohydrodynamic energy systems and advanced nuclear reactor technology. [Ref. 77:p.6,8]

Many of these technologies are dual-use and therefore, cooperation with foreign countries in attaining and developing these capabilities is an achievable possibility for China. Although China has emphasized indigenous development of its own technologies and sciences, it intends to link its internal efforts with imported advanced foreign technologies and foreign experts and then "digest,

assimilate, upgrade and renew" the imported technologies. [Ref. 43, 77:p. 9]

D. CONCLUSION

China has recognized that its previous emphasis on People's War and guerilla tactics no longer presents an adequate defense for China in the face of modern warfare. The resultant modernization of the People's Liberation Army requires an enormous amount of capital and advanced technologies and sciences that are presently beyond the reach of China's current capabilities. Therefore, modernization of the military will be irrevocably tied to the modernization of China's technology and science base, which in turn, will substantially influence China's economic resurgence. In the interim, nuclear weapons and strategic delivery vehicles will fulfil the two-fold purpose of ensuring China's defense during the lengthy modernization period and, through the sale of certain weapons systems, help finance the People's Liberation Army's modernization. The incremental growth and diversification of China's nuclear capabilities are doubly troubling because of the opacity of China's evolving nuclear strategy. Its incompatibility with western definitions of either "minimum deterrence" or "war fighting" make it difficult to divine China's nuclear intentions. China's emphasis on advanced technologies and their military, as well as civilian

applications, also enhance the belief that China is pursuing a more advanced and equivalent nuclear capability on par with current modern armed forces in the West. However, concerns that China is bent on achieving nuclear superiority and is intent on global supremacy or even regional hegemony are incompatible with China's strategic historical characteristics vis-à-vis its military strategies and goals. Additionally, China's economic constraints, its realization of its limitations; its major vulnerabilities in its defence posture and its emphasis on economic growth vice rapid modernization of a huge but archaic armed force conspire against the theory of a militaristic and nuclearly superior China. China's efforts to improve its nuclear forces are concentrated on quality not quantity and is more in keeping with a defensive rather than offensive nuclear strategy.

V. IMPLICATIONS

A. WHITHER CHINA?

China began its nuclear endeavors to protect itself against a threat it felt it could not equal much less defeat, the United States of America. By pursuing its nuclear capability it hoped only to give pause to any aggressor with the hopes of preventing a war by its superior political skill rather than its vast but underdeveloped army. China sought to be "undefeatable" not superior. The entire focus of post-Mao China has been to retain this position through the modernization of its military capabilities.

The dilemma has been how to modernize its military capability against ever increasing technical superiority without appearing aggressive and adventuristic. More to the point, how to pay for the modernization of an army equipped with 1950's technology into an army capable of engaging a twenty-first century equipped enemy?

The answer was a difficult one. It could not be made in the vacuum of military imperative only. China needed to revamp its entire ideological, economic and sociological practices. Deng Xiaoping knew this and thus was born the "four modernizations", "Socialism with Chinese

Characteristics", and the earnest pursuance of the "Five Principles of Cooperation" in its relations with nations.

To underscore the order in which China must remake itself and to emphasize that this order be followed, Deng Xiaoping put military modernization last, behind science and technology, agriculture and industry. Indeed, Deng Xiaoping's major domestic goals for the next twenty years revolved around the improvement of the lives of the Chinese people, not the aggrandizement of China's military as repeated here:

> The initial stage of socialism in China is a protracted historical stage which will take at least 100 years. Deng Xiaoping has put forth a fighting goal to be reached in three steps: The first step from 1980 to 1990 is to basically solve the problem of providing enough to eat and wear; the second step from 1990 to the end of this century is to enable the people to lead a comparatively well off life; and the third step is to reach the level of the intermediate developed countries by the middle of the next century (before spring of 1986, it was to approach the level of the developed countries). [Ref. 11:p. 28]

The implication of these goals was that China would have to concentrate on its internal development, not on aggression and war with its neighbors or the United States. Furthermore, with the introduction of "Socialism with Chinese characteristics" and the emphasis on technology and science as the key to China's future, good relations with nations capable of providing China with the tools to reach its ends were an imperative. This was underscored by Qiao

Shi, chairman of the National People's Congress Standing Committee:

> It can be said that we have the ability to be self-reliant in the world. Our defense policy has consistently been devoted to self-defense, and it will continue to be so. It is impossible for us to expand to other countries, and we are opposed to hegemonism. Some people have been disseminating the view in the international community to the effect that if China becomes strong in the future, it will be a threat to other countries. This is groundless. In the special speech by Mr. Deng Xiaoping in 1974, he said "China will never become a superpower. If, indeed, China becomes a superpower, other nations should join hands and defeat China." This policy remains unchanged. [Ref. 78]

However, above all else China, must remain independent and self-reliant in its growth. The price of China's modernization was not to be paid with capitulation to foreign desires and influences. China is socialist, it is non-aligned and it will progress on its own terms and in its own way. This has been China's basic premise since its inception as iterated by Deng Xiaoping:

> Independence, self-reliance, and charting our own course are the political foundations of the theory on building socialism with Chinese characteristic...[this has] always been and will always be our basic stand.... [Ref. 11:p. 28]

Nonetheless, the growth in capability of China's military is still regarded as threatening. Despite its claims to the contrary, the increasing capability of its nuclear forces as well as its reorganization along modern military lines poses a new challenge to the region. Again, however, taken in the context of a China that has been

underdeveloped for the majority of its modern history, it is not inconceivable that it is merely trying to develop a realistic defensive capability. This is an argument that is put forward time and again by the Chinese government:

> In today's turbulent world, all countries must possess the necessary means to protect their own safety at any time. This is common sense. For a long period, China had time and again reduced its military expenditure to such a low level that its outmoded equipment now lags behind that of Western countries by more than 20 years. It is natural for China to purchase some weapons from friendly countries and improve its equipment as planned. Many countries are also updating their weapons and equipment in accordance with their development programs. [Ref. 79]

Furthermore, China has repeatedly called for the

> Putting aside of disputes and carrying out joint development while upholding sovereignty...

as evidenced by its improving relations with Vietnam, India, Russia, Japan, and other Asian countries. Pessimism may construe this as a Chinese ploy to exert its will in the region and the buildup of its military as a precursor to its becoming a regional hegemonist. However, China's needs and its means do not support this view. China requires stability, good relations and tremendous amounts of economic exchanges to revitalize its standard of living and economy. To risk its future by embarking on a course of aggression and hegemonism is not only not in keeping with China's historical past, it is ultimately self-defeating.

Granted, the need for tremendous amounts of currency for the modernization of its country has spawned unwelcome and

even destabilizing practices by China. The most notable of these being its missile sales to the Middle East. However, the need for technology transfers and cash presents a two sided argument in that China must also temper its practices to suit the concerns of the Western nations upon which its relies so heavily on for the sources of its modernization efforts. China cannot afford to alienate the very states it is depending upon to aide in its growth.

This especially applies to its nuclear policies. This realization has already resulted in China's altering its positions on several nuclear issues and by its formally acceding to several of the nonproliferation regime's treaties. China no longer advocates the spread of nuclear weapons throughout the world, there is no indication that it has ever transferred nuclear weapons or nuclear weapons production technology to another nation. It has engaged in many similar practices that the Western nations have engaged in with respect to the transfers of nuclear energy technology, weapons transfers and dual-use technology. It has sold its wares to the same areas that the United States has for years sold its arms. In short, many of the things that China is doing are not exclusive to China.

What is different is China's unwillingness to impose constraints on its clients; viewing this as unwarranted interference into a nation's sovereign affairs. Self-defense is the purview of every nation. How a nation goes

about ensuring its security is none of China's business, except to the extent that it can profit from it!

This independent and mercantilism approach to foreign policy is the root of the dispute between China and the United States vis-à-vis its arms transfer policies, defense policies and even its human rights stance. China believes no nation has the right to impose its standards and principles upon another nation; while the United States believes there are standards of conduct and principles that all nations should follow and must embrace. In short, China engages in the same conduct towards other nations that it demands for itself, complete noninterference in its sovereign affairs. Hardly the cast of a nascent nuclear hegemonistic power!

It follows that the challenge from China is not a military challenge but a foreign policy challenge in which China and the United States must find equal ground and accommodate each other's views and positions.

B. IMPLICATIONS FOR AMERICAN FOREIGN POLICY

The end of the Cold War requires the United States to reevaluate its foreign policy premises and redefine the basis of its relationships with allies and non-allies alike. The bipolar and divisive nature of the old Soviet versus United States enmity that guided our foreign policies for so long must be swept away. The United States should view its

relations with nations on their own merits and on their own cultural, ideological and historical premises, not in the light of the old Soviet versus American alliances.

This especially applies to China. China's emergence as a potential economic and military power engaged in the global economy cannot and should not be ignored. Nor should it be outcast as a relic of the "old communist bloc" and a latent threat to global security. As a nuclear power in its own right, and as one of the largest nations on earth, China's participation in global security is an imperative. We must attempt to include China in all aspects of international relations and must try to understand China's views on different issues.

This may be difficult. There are many differences between China and the United States, especially with respect to nuclear issues. What follows are some suggestions on how United States foreign policies can be adapted to engage China in meaningful dialogue on nuclear issues. These measures are not only exclusive to nuclear issues or to China. They represent a method of "doing business" that is not automatically dictatorial or insensitive to the concerns and national characteristics of other nations.

With respect to China; as a member of the United Nations Council, a country with the largest military in the world, and as a country undergoing fundamental ideological and sociological change, a special sensitivity should be

accorded to it in our relations. China's biggest gripe with the United States is our insistence in dealing with it from a purely superpower stance. We do not treat China as an equal. This especially holds true in our negotiations concerning global security issues such as disarmament, nuclear proliferation and arms control. The habit of engaging only the former Soviet Union in the preliminary negotiations regarding nuclear issues and not bringing to the table China and the other medium nuclear powers from the onset, revealed a disregard for their security interests and a tacit acknowledgement between the two superpowers that only our interests counted.

Future negotiations regarding nuclear issues that affect global security concerns should include China and its views from the beginning. Issues concerning global ballistic missile defence systems, comprehensive test bans, arms control to the Middle East and Asia, and even future disarmament negotiations between Russia and the United States should include China and its security interests.

The Missile Technology Control Regime needs to be revamped to take into account the interests of <u>all</u> suppliers and recipients and include <u>all</u> nations, not just the small exclusive club of Western nations who make up all the rules regarding missile technology transfers. These rules are discriminatory, inflexible and unrealistic. Rather than trying to prevent the proliferation of missiles, which is

not fair to those nations who do not currently have this defensive ability, the regime should concentrate on the safe transfer and receipt of relevant technologies. It should engender an atmosphere of openness about capabilities rather than forcing nations with security concerns to be clandestine about their transactions. All exporting nations should be given verifiable guarantees by all recipients that transferred technologies will not be diverted from their stated purpose. Any nation wanting to export the technologies should be invited to become a full member in the regime and entitled to the full rights accorded a full member. Intelligence sharing, participation in global disarmament mechanisms, participation in communal efforts to address regional security concerns of recipients and suppliers should be accorded to all members of the regime.

Global disarmament talks should begin to take place with special efforts made to address the security concerns of unstable regions such as the Middle East. Bilateral talks brokered by only the superpowers do not adequately address the interests of all nations in the region.

All regional nations' participation in regional security matters should be encouraged; for example, concerns about the Korean Peninsula need to be addressed by China, Japan, South Korea, North Korea as well as the Southeast Asian nations, not just the United States, Russia and Japan. The

same can be said for addressing the issue of Myanmar, the Spratly Islands and other Asian areas of conflict.

Engagement by all nations in security matters rather than just power brokering between the superpowers will foster a more stable global environment that better addresses the security needs of different regions. The United States, by taking the lead in inviting all interested parties to the negotiation table, regardless of regime ideology, can go a long way towards fostering peaceful resolutions to security concerns.

Finally, while the emphasis on global democratization is a noble aspiration for the United States to engender, it is not a practical or necessarily feasible foreign policy goal. Many nations do not have the requisite building blocks to form viable democracies. Many do not have the historical and cultural perspectives that would readily embrace a democratic system of government. Not being a democracy, does not necessarily mean that the regime is morally bankrupt or an oppressive totalitarian state.

Rather than push "democracy" as a favored foreign policy goal, we should stress open communication with all nations, economic growth for all nations and a stable and peaceful global environment for all. We must recognize the right of each nation to determine its own form of government and to set its own social standards. Security and political issues

should address regional realities, not outside influences from distant actors.

These are not easy guidelines to follow for American foreign policy makers. It is difficult to include the views of all nations, especially nations that we view with suspicion and reticence as is the case with China. Perhaps the first step would be to accept China for what it says it is; a nation attempting to better the lives of its people and ensuring the security of its nation in a dangerous and potentially unstable world. Coming from a perspective of trust and mutual respect, rather than one of disbelief and combativeness will do much to foster relations between our two nations.

C. CONCLUSION

China's current nuclear policies and capabilities, while becoming more powerful, still represent a modest endeavor rather than a forced attempt to become a nuclear superpower capable of matching the United States. China's nuclear capability ensures its prestige among the more militarily capable nations and economically advanced powers and gives it a stronger voice in the arena of international affairs. In the modern military environment China has foreseen that its military capabilities are in danger of rapidly being rendered obsolete, especially its nuclear capabilities. It has therefore continued the gradual but successful

modernization of its nuclear forces to prepare for these new challenges, a premise that has been the mainstay of its nuclear development program since its inception.

The modernization of its nuclear forces is linked to its economic policy and national development thereby serving two purposes:

- the modernization of its military coincides with a major impetus for technological and scientific advancement of China's overall industrial base;
- the modernization of its force is subordinate to and supportive of the economic realities of its new economic policies of open markets, profit motivation and the advancement of the Chinese people's quality of life.

It is not unreasonable to assume that China's nuclear forces are being modernized as a part of an overall economic plan that requires the military to pay for its modernization on its own and not at the expense of the Chinese people's newly emerging prosperity. Modernization is intended for the defense of China and is in keeping with the security needs of a great power center in a rapidly changing region of the world.

Additionally, China continues to grapple with its own internal uncertainties regarding a communist regime endeavoring to embrace open market reforms without completely delegitimizing itself. Avoidance of internal chaos and self destruction are arguably China's primary focus not world domination. A stable, cooperative and

peaceful world are as important to China's security and economic goals as they are to the United States.

United States' foreign policy towards China should take on a substantially more relevant and pragmatic stance rather than treating China as a communist threat that must be destroyed. Understanding China today--helping rather than hindering its progress; and seeking peaceful consensus in those areas of disagreement between the two nations--should be the logical end of American policy.

APPENDIX A

MUTUAL DEFENSE TREATY BETWEEN THE UNITED STATES AND THE REPUBLIC OF CHINA, December 2, 1954

The Parties to this Treaty,

Reaffirming their faith in the purposes and principles of the Charter of the United Nations and their desire to live in peace with all peoples and all Governments, and desiring to strengthen the fabric of peace in the West Pacific Area,

Recalling with mutual pride the relationship which brought their two peoples together in a common bond of sympathy and mutual ideas to fight side by side against imperialist aggression during the last war,

Desiring to declare publicly and formally their sense of unity and their common determination to defend themselves against external armed attack, so that no potential aggressor could be under the illusion that either of them stands alone in the West Pacific Area, and

Desiring further to strengthen their present efforts for collective defense for the preservation of peace and security pending the development of a more comprehensive system of regional security in the West Pacific Area,

Have agreed as follows:

Article I

The Parties undertake, as set forth in the Charter of the United Nations, to settle any international dispute in which they may be involved by peaceful means in such a manner that international peace, security and justice are not endangered and to refrain in their international relations from the threat or use of force in any manner inconsistent with the purposes of the United Nations.

Article II

In order more effectively to achieve the objective of this Treaty, the Parties separately and jointly by self-help and mutual aid will maintain and develop their individual and collective capacity to resist armed attack and communist subversive activities directed from without against their territorial integrity and political stability.

Article III

The Parties undertake to strengthen their free institutions and to cooperate with each other in the development of economic progress and social well-being and to further their individual and collective efforts toward these ends.

Article IV

The Parties, through their Foreign Ministers or their deputies, will consult together from time to time regarding the implementation of this Treaty.

Article V

Each Party recognizes that an armed attack in the West Pacific Area directed against the territories of either of the Parties would be dangerous to its own peace and safety and declares that it would act to meet the common danger in accordance with its constitutional processes.

Article VI

The Government of the Republic of China grants, and the Government of the United States of America accepts, the right to dispose such United States land, air and sea forces in and about Taiwan and the Pescadores as may be required for their defense, as determined by mutual agreement.

Article VIII

This Treaty does not affect and shall not be interpreted as affecting in any way the rights and obligations of the

Parties under the Charter of the United Nations or the responsibility of the United Nations for the maintenance of international peace and security.

Article IX

This Treaty shall be ratified by the Republic of China and the United States of America in accordance with their respective constitutional processes and will come into force when instruments of ratification thereof have been exchanged by them at Taipei.

Article X

This Treaty shall remain in force indefinitely. Either Party may terminate it one year after notice has been given to the other party.

SOURCE: Lasater, Martin L., The Taiwan Issue in Sino-American Strategic Relations, pp. 251-253, Westview Press, 1984.

APPENDIX B

COMPARISON OF NUCLEAR POWER'S YEARS BETWEEN THE FIRST ATOMIC DETONATION AND ACQUISITION OF OTHER TECHNOLOGIES

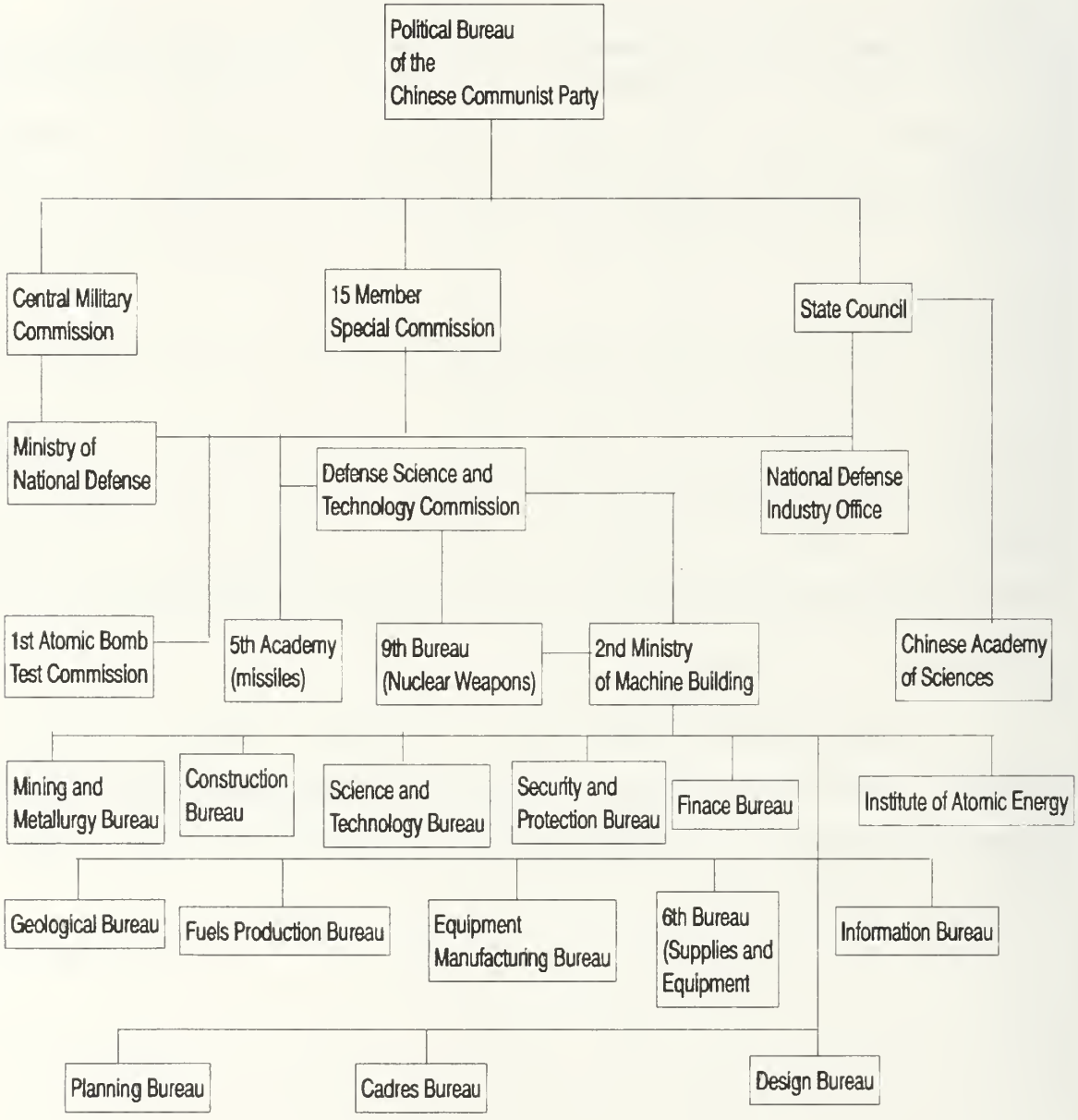
	US	USSR	UK	FRANCE	CHINA
H-BOMB	7 yrs	4 yrs	5 yrs	6 yrs	3 yrs
SPACE SATELLITE	13 yrs	8 yrs		10 yrs	6 yrs
ICBM	15 yrs	6 yrs			16 yrs
SLBM	15 yrs	12 yrs	*	8 yrs	18 yrs
MIRV	23 yrs	24 yrs	*	20 yrs	22 yrs

* UK incorporated US Polaris SLBM (MIRVed) therefore not counted as an indigenous effort.

SOURCE: adapted from Lin, Chong-Pin, China's Nuclear Weapons Strategy: Tradition within Evolution, p. 39, Lexington Books, 1988.

APPENDIX C

CHINA'S NUCLEAR PROGRAM ORGANIZATION, 1959-1964



SOURCE: Lewis, John Wilson and Xue Litai, China Builds the Bomb, pp. 56-58, Stanford University Press, 1988.

APPENDIX D

STATEMENT OF THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA, OCTOBER 16,1964

China exploded an atomic bomb at 15:00 hours on October 16, 1964, thereby successfully carrying out its first nuclear test. This is a major achievement of the Chinese people in their struggle to strengthen their national defence and oppose the U.S. imperialist policy of nuclear blackmail and nuclear threats.

To defend oneself is the inalienable right of every sovereign state. To safeguard world peace is the common task of all peace-loving countries. China cannot remain idle in the face of the ever-increasing nuclear threats from the United States. China is conducting nuclear tests and developing nuclear weapons under compulsion.

The Chinese Government has consistently advocated the complete prohibition and thorough destruction of nuclear weapons. If this had been achieved, China need not have developed nuclear weapons. But our proposal has met with stubborn resistance from the U.S. imperialists. The Chinese Government pointed out long ago that the treaty on the partial halting of nuclear tests signed in Moscow in July 1963 by the United States, Britain, and the Soviet Union was a big fraud to fool the people of the world, that it had increased, and not decreased, the nuclear threat of U.S. imperialism against the people of China and of the whole world. Even at that time, the U.S. Government openly declared that the conclusion of this treaty did not in the least mean that the United States would not conduct underground tests or that it would not use, manufacture, stockpile, export or spread nuclear weapons. Facts over the past year and more have fully proved this point.

During this period, the United States had not stopped manufacturing various nuclear weapons on the basis of nuclear tests it has already conducted. Seeking ever-greater perfection, the United States has, moreover, during this same period conducted several dozen underground nuclear tests to improve further the nuclear weapons it manufactures. In stationing nuclear submarines in Japan, the United States is posing a direct threat to the Japanese people, the Chinese people, and the peoples of all other Asian countries. Through the so-called multilateral nuclear

force, the United States is now trying to put nuclear weapons into the hands of the West German revanchists, thereby threatening the security of the German Democratic Republic and the other socialist countries in Eastern Europe. U.S. submarines carrying Polaris missiles with nuclear warheads are prowling the Taiwan Straits, the Bac Bo Gulf (Tonkin Gulf), the Mediterranean Sea, the Pacific Ocean, the Indian Ocean, and the Atlantic Ocean, everywhere threatening peace-loving countries and all the peoples who are fighting against imperialism, colonialism, and neo-colonialism. Under these circumstances, how can it be considered that U.S. nuclear blackmail and nuclear threats against the people of the world have ceased to exist just because of the false impression created by the temporary halting of atmospheric tests by the United States?

The atomic bomb is a paper tiger. This famous statement by Chairman Mao Tse-tung is known to all. This was our view in the past and this is still our view at present. China is developing nuclear weapons not because it believes in their omnipotence nor because it plans to use them. On the contrary, in developing nuclear weapons, China's aim is to break the nuclear monopoly of the nuclear powers and to eliminate nuclear weapons.

The Chinese Government is loyal to Marxism-Leninism and proletarian internationalism. We believe in the people. It is the people, and not any weapons, that decide the outcome of a war. The destiny of China is decided by the Chinese people, while the destiny of the world is decided by the people of the world, and not by nuclear weapons. China is developing nuclear weapons for defence and for protecting the Chinese people from U.S. threats to launch a nuclear war.

The Chinese Government hereby solemnly declares that China will never at any time or under any circumstances be the first to use nuclear weapons.

The Chinese people resolutely support all the oppressed nations and peoples in their struggles for liberation. We firmly believe that, by relying on their own struggles and by helping one another, the people of the world are bound to triumph. China's success in making nuclear weapons is a great encouragement to the revolutionary people of the world in their struggles and a great contribution to the cause of defending world peace. On the question of nuclear weapons, China will not commit the error of adventurism or the error of capitulationsism. The Chinese people can be trusted.

The Chinese Government fully understands the good intentions of peace-loving countries and peoples in demanding an end to all nuclear tests. But more and more countries are coming to realize that the more exclusive the monopoly of nuclear weapons held by the U.S. imperialists and their partners, the greater the danger of a nuclear war.

They are very arrogant when they have such weapons, they will not be so haughty, their policy of nuclear blackmail and nuclear threats will not be so effective, and the possibility of complete prohibition and thorough destruction of nuclear weapons will increase. We sincerely hope that a nuclear war will never break out. We are deeply convinced that, so long as all peace-loving countries and peoples make joint efforts and persist in the struggle, nuclear war can be prevented.

The Chinese Government hereby solemnly proposes to the governments of the world that a summit conference of all the countries of the world be convened to discuss the question of the complete prohibition and thorough destruction of nuclear weapons, and that as the first step, the summit conference conclude an agreement to the effect that the nuclear power and those countries which may soon become nuclear powers undertake not to use nuclear weapons either against non-nuclear countries and nuclear-free zones or against each other.

If those countries in possession of large numbers of nuclear weapons are not even willing to undertake not to use them, how an they expect countries not yet in possession of such weapons to believe in their sincerity for peace and to refrain from taking defensive measures that are necessary and within their capabilities?

The Chinese Government will, as always, exert every effort to promote, through international consultations, the realization of the lofty aim of complete prohibition and thorough destruction of nuclear weapons. Until that day comes, the Chinese Government and people will firmly and unswervingly follow their own path to strengthen their national defence, defend their motherland, and safeguard world peace.

We are convinced that man, who creates nuclear weapons, will certainly be able to eliminate them.

SOURCE: From Break the Nuclear Monopoly, Eliminate Nuclear Weapons, pp. 1-5, Beijing, 1965 as cited in Lewis, John Wilson and Xue Litai, China Builds the Bomb, pp. 241-242, Stanford University Press, 1988.

APPENDIX E

CHINESE VERSUS UNITED STATES STRATEGIC NUCLEAR FORCES

United States Nuclear Forces 1 June 1992: [()=Yr 2003]

Delivery Vehicle	Launchers Deployed	Warheads per Launcher	Total Warheads
ICBM			
Minuteman II	450(0)	1(0)	450(0)
Minuteman III	500(500)	3(1)	1,500(500)
MX	50(0)	10(0)	500(0)
Sub-total ICBM	1,000(500)	-	2,450(500)
SLBM			
Poseidon C-3	192(0)	10(0)	1,920(0)
Trident C-4	384(192)	8(4)	3,072(768)
Trident D-5	120(240)	8(4)	960(960)
Sub-total SLBM	696(432)	-	5,952(1,728)
Total Ballistic Missiles	1,696(932)	-	8,402(2,228)
Bombers			
ALCM-equipped			
B-52	150(95)	10(8)	1,500(952)
B-52	28(0)	20(0)	540(0)
Non-ALCM			
B-52	278(0)	1(0)	278(0)
B-1B	95(0)	95(0)	1(0)
B-2	0(20)	0(16)	0(320)
Total Bombers	551(115)	-	2,413(1,272)
GRAND TOTAL	**2,247(1,047)**	-	**10,810(3,500)**

Chinese Strategic Forces 1992

LAND-BASED			
ICBM			
CSS-4(DF-5)	10	2-3(MIRV?)[a]	10
CSS-3(DF-4)	10	10	10
IRBM			
CSS-2(DF-3)	85-125	85-125	85-125
CSS-1(DF-2)	40-60	40-60	40-60
SEA-BASED			
SLBM			
CSS-N-3(JL-1)	24[b]	24-48	24-48
AIR			
Medium range bombers			
H-6	120	100-30	100-30
H-5	15-30	15-30	15-30
Bombs			250-350[c]

Notes:

a. Some DF-5 ICBMs are believed to be equipped with MIRV. The estimate given by the IISS is six, but the U.S. Defense Intelligence Agency, CIA and SIPRI, China possesses ten DF-4's and DF-5's each.

b. China has two Xia-class SSBNs and one Golf-class SSB. In 1988, only one Xia-class submarine was operational. Three more Xia-class SSBNs are under construction.

c. Estimates of nuclear bombs in China's possession vary from 200-400. All bombs are carried by H-6 and H-5 aircraft.

SOURCES: SIPRI YEARBOOK 1992: World Armaments and Disarmaments, Stockholm International Institute for Peace, 1992; Lennox, Duncan, ed. Jane's Strategic Weapon's Systems, Jane's Information Group, 1990; Malik, J. Mohan, "Chinese Debate on Military Strategy: Trends and Portents", pp. 5-6, Journal of Northeast Asian Studies, Volume 9, Number 2, Summer 1990.

APPENDIX F

CHINA'S NUCLEAR AND CONVENTIONAL MISSILES

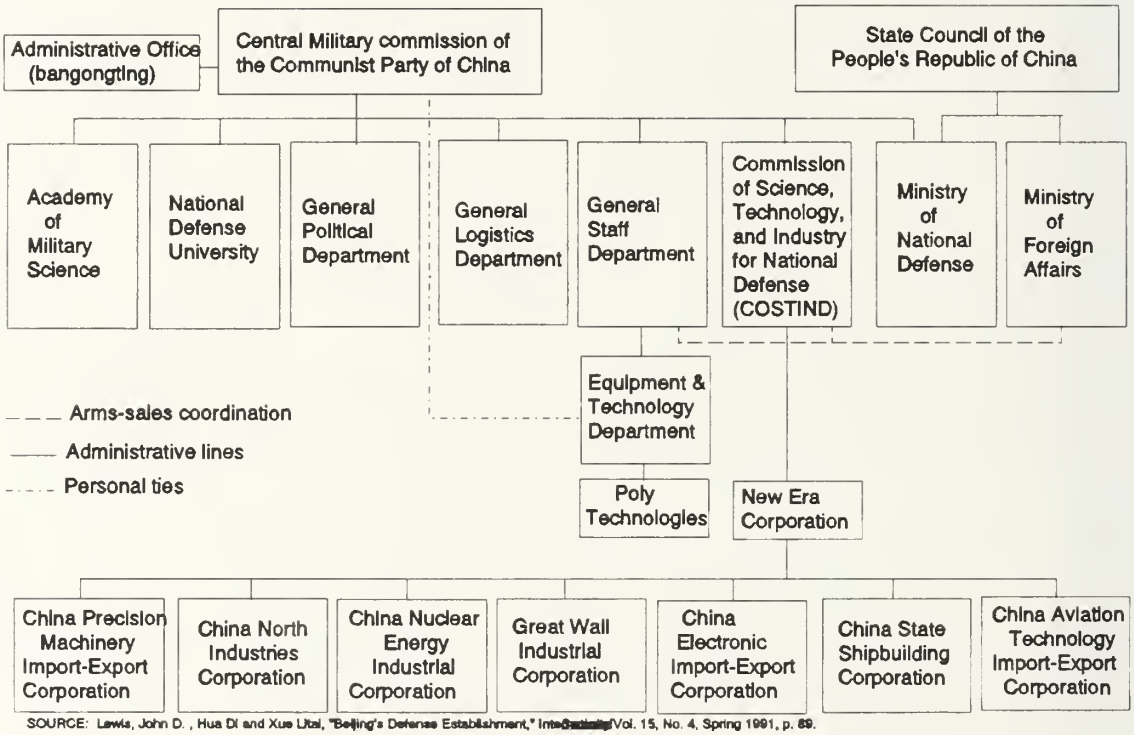
WEAPONS	RANGE	PAYLOAD	WARHEADS	# DEPLOYED	REMARKS
INTERCONTINENTAL BALLISTIC MISSILES (ICBM)					
CSS-4(DF-5)	11-13,000 KM	SINGLE(2 MIRV?)	1-5 MT	10 LAUNCHERS	20 MISSILES
CSS-5(DF-6)	16-20,000 KM	UNKNOWN	UNKNOWN	UNKNOWN	UNDER DEVELOP.
SHORT-RANGE ICBM					
CSS-3(DF-4)	7000 KM	SINGLE	2 MT	8 DEPLOYED	30 PRODUCED
INTERMEDIATE ICBM					
CSS-2(DF-3)	2600 KM	SINGLE	2 MT	85-125	SOLD TO S.A.
TACTICAL BALLISTIC MISSILES					
M-9	600KM	SINGLE	500 KG	nuclear/conv	EXPORT/DEPLOY
M-11	300 KM	SINGLE	500 KG	nuclear/conv	UNDER DEVELOP.
SUBMARINE LAUNCHED BALLISTIC MISSILES					
CSS-N-3(JL-1)	2700 KM	SINGLE	2 MT	24 (12 per sub)	2 ZIA SUBS
CSS-NX-4	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNDER DEVELOP.
THEATER DEFENSE MISSILES					
HQ-2 (SAM)	35 KM	HE blast frag.	130 KG	sold to N.K.,Iraq,Iran,Pakistan	

WEAPONS	RANGE	PAYLOAD	WARHEADS	# DEPLOYED	REMARKS
HQ-61	10 KM	HE	Also known as CSA-N-2,GRND/SHIP DEPLOYED		
FM-80	10 KM	HE blast frag.	14 KG	available for export	
KS-1	40 KM	UNKNOWN	UNKNOWN	engages A/C,Helo,RPV,tacwps	
AIR-TO-AIR MISSILES					
PL-2/3	3 KM	HE blast frag.	11.3 KG	no longer in prod.	
PL-5	3 KM	HE blast frag.	9 KG	carried by J-5/6/7 F-7M/A-5M aircraft	
PL-7	3 KM	HE frag.	13 KG	carried by J-7,A-5M,F-7M, J-8II aircraft	
PL-8	5 KM	HE frag.	11 KG	air defence gun	for export
PL-9	5 KM	HE	10 KG	developed for export/use in '95	
PL-10	15 KM (est.)	HE frag.	first medium range AAM; under development		
AIR-TO-SURFACE AND SURFACE-TO-SURFACE MISSILE					
HONGJIAN-8	3 KM	HE	3 KG	Helicopter launched	
C-101/HY-3	45/100 KM	HE (mach 2)	400/500 KG available for export		
C-601	95 KM	HE blast	500 KG/2 per H-6 bomber;possible export: Iraq/Iran		
HY-4	150 KM	HE shaped chg	500 KG	deployed aboard ships	
YJ-1/2	40/120 KM	HE semi-armor	165 KG	air/surface launched;exp: Thai.	
CSS-N-1(Styx)	40 KM	HE	400 KG	grnd/ship launched	
CSS-N-2(Silkworm)	80 KM	HE	500 KG	N.K. & Egypt producing/exporting	
FL-1/2	40/50 KM	HE	513/365 KG	exp:Egypt,Bangladesh,Thailand,Pak	
FL-7	30 KM	HE	365 KG	in-service 1992; not confirmed	

SOURCES: Lennox, Duncan, Jane's Strategic Weapon Systems, Jane's Air-Launched Weapons, Jane's Naval Weapon Systems, Jane's Theater Defence Systems, Jane's Information Group, 1990. and The International Institute for Strategic Studies, The Military Balance, 1990-1991, Brassey's, 1992.

APPENDIX G
CHINA'S ARMS SALES BUREAUCRACY

CHINA'S ARMS-SALES MILITARY ORGANIZATION


Administrative Office (bangongting)
Central Military commission of the Communist Party of China
State Council of the People's Republic of China
Academy of Military Science
National Defense University
General Political Department
General Logistics Department
General Staff Department
Commission of Science, Technology, and Industry for National Defense (COSTIND)
Ministry of National Defense
Ministry of Foreign Affairs
Equipment & Technology Department
Arms-sales coordination
Administrative lines
Personal ties
Poly Technologies
New Era Corporation
China Precision Machinery Import-Export Corporation
China North Industries Corporation
China Nuclear Energy Industrial Corporation
Great Wall Industrial Corporation
China Electronic Import-Export Corporation
China State Shipbuilding Corporation
China Aviation Technology Import-Export Corporation

SOURCE: Lewis, John D. , Hua Di and Xue Litai, "Beijing's Defense Establishment," International Security, Vol. 15, No. 4, Spring 1991, p. 89.

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